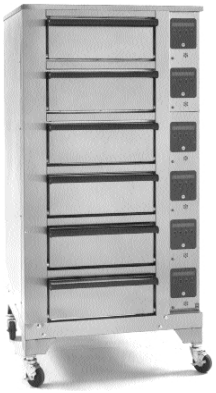
ELECTRIC

MULTI-PURPOSE GARLAND OVEN
MC-E20-2
MC-E20-2S
MC-E20-4
MC-E20-4C
MC-E20-6
MC-E20-6C

GARLAND™
A WELBILT® COMPANY

SERVICE MANUAL



MANUFATURED EXCLUSIVELY FOR
McDonald's
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NOTE:This manual pertains to 2 cell, 4 cell, and 6 cell pizza ovens. The reader/operator must interpret its contents to applicable needs. However, if there is any question of interpretation of any literature pertaining to Garland / McDonalds pizza ovens, please contact our Customer Service Department at one of the phone numbers listed above.

WARNING:
This product contains chemicals known to the State of California to cause cancer. *Installation and servicing of this product could expose you to airborne particles of glasswool/ceramic fibers. Inhalation of airborne particles of glasswool/ceramic fibers is known to the State of California to cause cancer.

PLEASE READ ALL SECTIONS OF THIS MANUAL AND RETAIN FOR FUTURE REFERENCE.

CAUTION: THIS EQUIPMENT MUST ONLY BE OPERATED UNDER AN APPROVED HOOD SYSTEM

THIS EQUIPMENT "MUST" BE INSTALLED AND COMMISSIONED BY A PROFESSIONAL FACTORY TRAINED TECHNICIAN

Printed in the U.S.A
(07/00)

Part #MCDSVMN Rev. 5

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WARRANTY

We warranty to the original purchaser only, that this new GARLAND commercial cooking equipment sold by us is free from all defects in material and factory workmanship for a period of one year from our date of shipment.

Further, component parts (excluding controllers and motors) will continue in warranty (parts value only) for an additional 24 months beyond the first year of coverage.

Provided that:

A. The equipment has not been accidentally or intentionally damaged, altered, abused]or misused.

B. The equipment is properly installed, adjusted, operated and maintained.

C. Has the warranty serial number affixed to the appliance by us that has not been defaced, obliterated or removed.

D. An acceptable report for any claim under this warranty is supplied to us.

E. The equipment is not sold or used for home or residential use.

Any defective part (excluding broken glass, ceramics, or porcelain, and light bulbs) brought to the attention of the selling dealer or a listed Authorized GARLAND Service Agency will be repaired or replaced with out charge within the United States. Shipment outside the United States will be prepaid to our closest port.

We assume no liability for diagnosis, normal maintenance such as lubrication, adjustment, or calibration of controls, nor for the cost of travel in excess of either two (2) hours of fifty (50) miles to and from the installation by an Authorized GARLAND Service Agency.

This warranty is limited and is lieu of all other warranties, expressed or implied, and we neither assume nor authorize any person to assume for us any other obligation or liability in connection with our equipment. We, our employees, or our agents shall not be held liable for any claims for personal injuries or consequential damages or loss, however caused.

INTRODUCTION

The model MC-E20-2, MC-E20-4 and MC-E20-6 are electric, air impingement ovens. The -4 is a four cell oven and the -6 is a six cell oven. The -4 and -6 cell ovens also inter-lock to ventilation hood system and fire suppression system.

The models MC-E20-4C and MC-E20-6C are electric, air impingement ovens. However, these ovens are exclusively for use in Canada and offer NO inter-lock system to ventilation or fire suppression system.

READ ALL SECTIONS OF THIS MANUAL

SAFETY

The GARLAND air impingement oven has many safety features incorporated. However, the only way to ensure safe operation is to fully understand the proper installation, operation and maintenance procedures. The instructions in this manual have been prepared to aid you in learning the proper procedures.

Where information is of particular importance or is safety related, the word NOTE, CAUTION or WARNING are used. Their usage is described below:

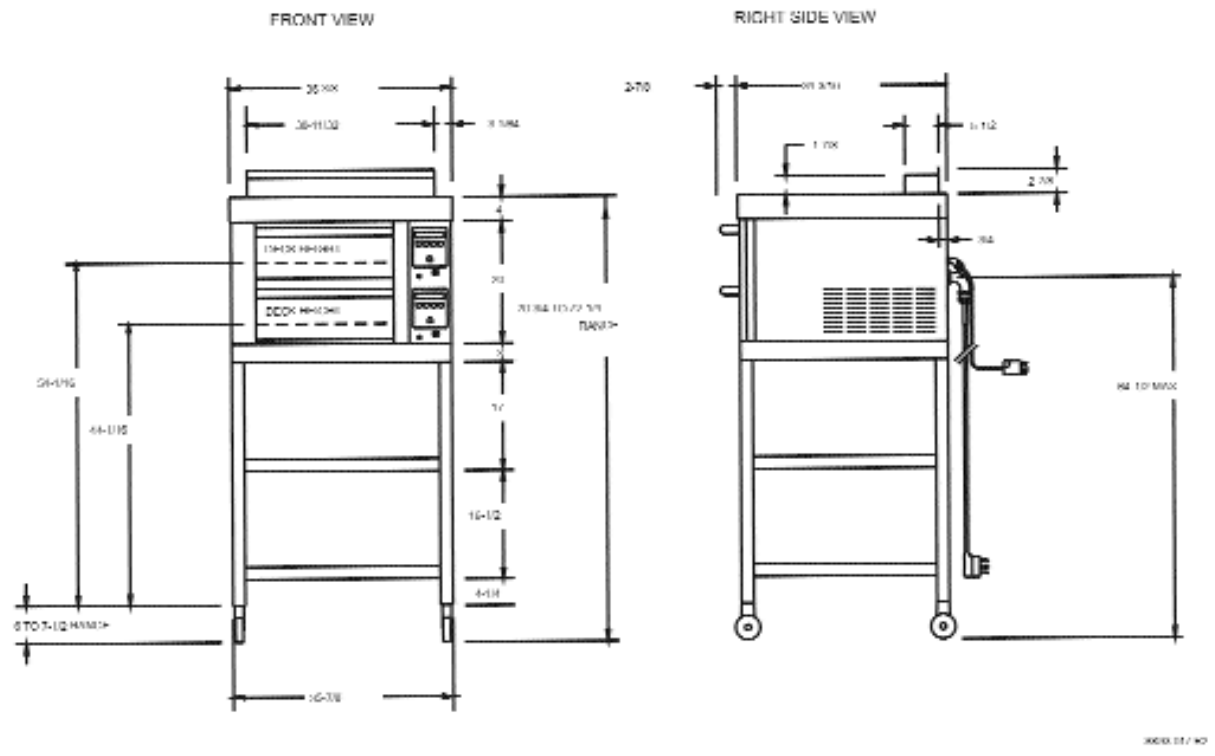
NOTE - The word NOTE is used to highlight especially important information.

CAUTION - The word CAUTION is used to alert you to a procedure that, if not performed properly, may damage the equipment.

WARNING - The word WARNING is used to alert you to a procedure, that if not performed properly, may cause personal injury.

We suggest installation, maintenance and general repairs be performed by local Authorized GARLAND Service Agencies shown in your GARLAND Agency/Distributor list provided with the oven.

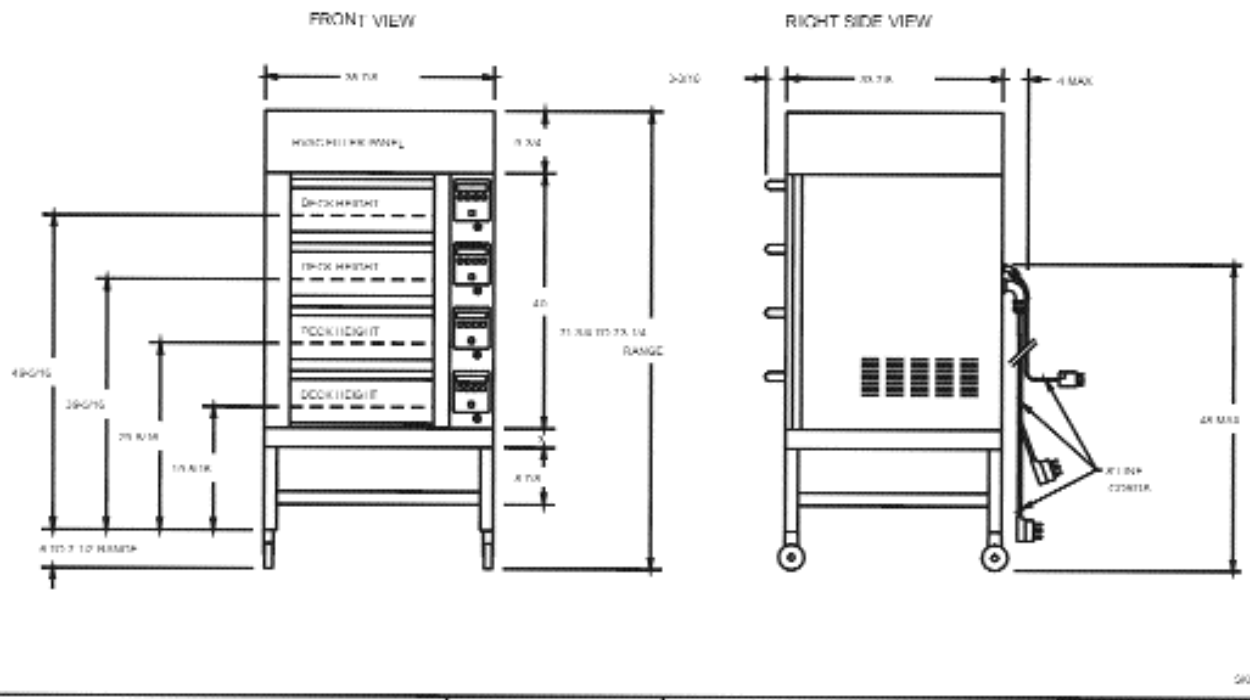
DIMENSIONAL DIAGRAM
MC-E20-2



	KW LOADING	SINGLE PHASE (ONLY) NOMINAL AMPERES PER LINE						RECEPTACLE REQUIRED
	240/208V	240V			208V			
	10.0	X	Y		X	Y		60 AMP 250 VOLT HUBBLE #A360 OR EQUIVALENT
		41	41		48	48		

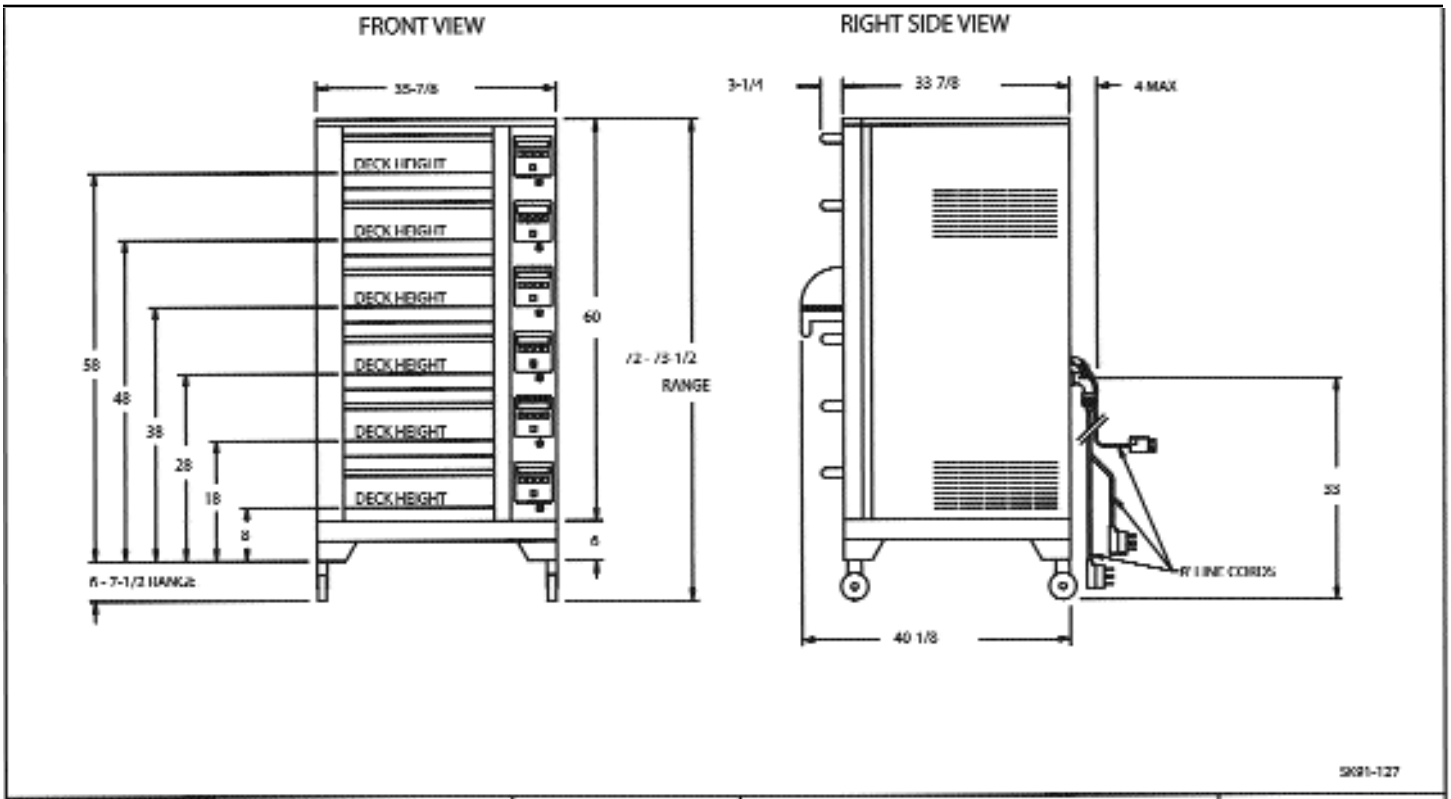
ADDITIONAL REQUIRED CONNECTION	HVAC HOOD/FIRE SUPPRESSION INTERLOCK CIRCUIT - 120V, 1 AMP, SINGLE PHASE	L21-20R

DIMENSIONAL DIAGRAM
MC-E20-4



ELECTRICAL REQUIREMENTS	KW LOADING 240V/208V	THREE PHASE (ONLY) NOMINAL AMPERES PER LINE						NEMA RECEPTACLE REQUIRED
		240V			208V			
-NOTE- TWO CIRCUITS REQUIRED LOADING INFORMATION IS FOR EACH CIRCUIT	10.0	X	Y	Z	X	Y	Z	#15-60R
		26	19	26	31	22	31	
ADDITIONAL REQUIRED CONNECTION	HVAC HOOD/FIRE SUPPRESSION INTERLOCK CIRCUIT - 120V, 1 AMP, SINGLE PHASE							L21-20R

DIMENSIONAL DIAGRAM
MC-E20-6



ELECTRICAL REQUIREMENTS	KW LOADING 240V/208V	THREE PHASE (ONLY) NOMINAL AMPERES PER LINE						NEMA RECEPTACLE REQUIRED
		240V			208V			
-NOTE- TWO CIRCUITS REQUIRED LOADING INFORMATION IS FOR EACH CIRCUIT	15.0	X	Y	Z	X	Y	Z	#15-60R
		36	36	36	42	42	42	
ADDITIONAL REQUIRED CONNECTION	HVAC HOOD/FIRE SUPPRESSION INTERLOCK CIRCUIT - 120V, 1 AMP, SINGLE PHASE							L21-20R

INSTALLATION - U.S.A.

CAUTION - Prior to installation, check the electric supply to ensure input voltage and phase match the equipment voltage rating and phase. See data plate located top front of top cell control section.

NOTE - The -4 and -6 have two (2) Power Supply Cords and one (1) Interconnect Cord. Each plug shall be supplied by an individual branch circuit of 60 AMPS. These instructions must be followed to ensure proper installation of this unit. The power connections for the oven are two (2) NEMA No. 15-60P, 60 AMP, 208/240 Volt, 3 Phase plugs and one (1) NEMA No. L21- 20P, 20 AMP, 120/208 Volt, 1 Phase plug. The -2 utilizes one, 60 AMP, 250 Volt, 1 Phase plug, (receptacle provided).

Unit is to be located directly under ventilation system.

Unit must maintain a four (4") minimum clearance from rear wall.

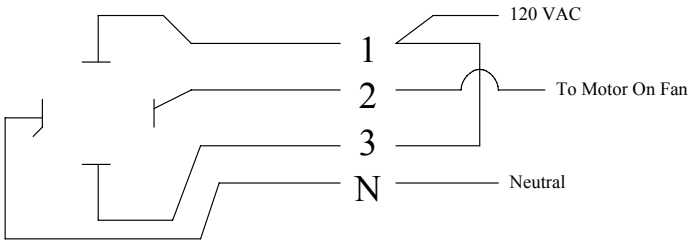
Unit must be level and front casters placed in locked position.

WARNING - The appliance area must be kept free and clear of combustibles.

WARNING - All electrical appliances must be electrically grounded in accordance with local codes or in the absence of local codes, with national electric code ANSI/NFPA - latest version.

CAUTION - The - 4 and - 6 have more than one (1) power supply cord. Unplug all cords before moving or servicing this appliance.

WARNING - **INSTALLER NOTE** - The -4 and -6 ovens are designed for connection to a special interlock system. Check receptacle wiring diagram below before connecting.



INSTALLATION - CANADA

CAUTION - Prior to installation, check the electric supply to ensure input voltage and phase match the equipment voltage rating and phase. See data plate located top front of top cell control section.

NOTE - A four (4) pole, five (5) wire plug and a four (4) wire with ground cord must be provided for power connection on the -4C and -6C. Check the local Codes and Standard for proper wire size.

Unit must maintain a four (4") minimum clearance from rear wall.

Unit must be level and front casters placed in locked position.

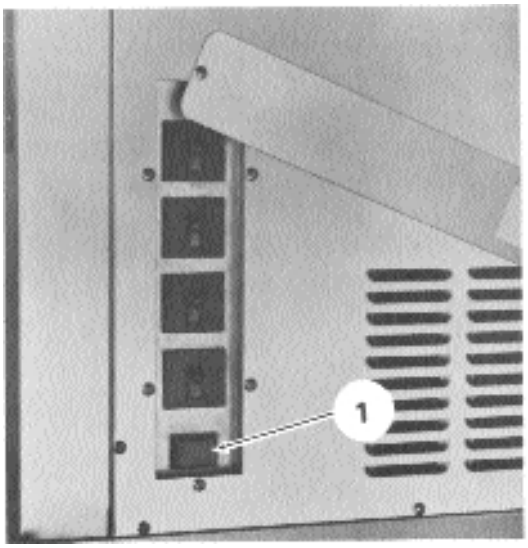
WARNING - The appliance area must be kept free and clear of combustibles.

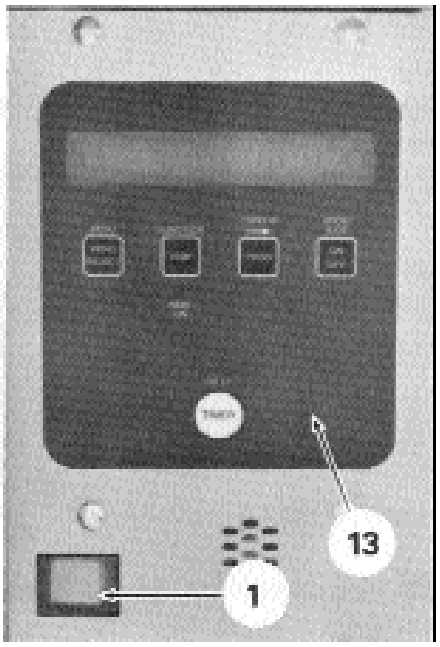
WARNING - All electrical appliances must be electrically grounded in accordance with local codes.

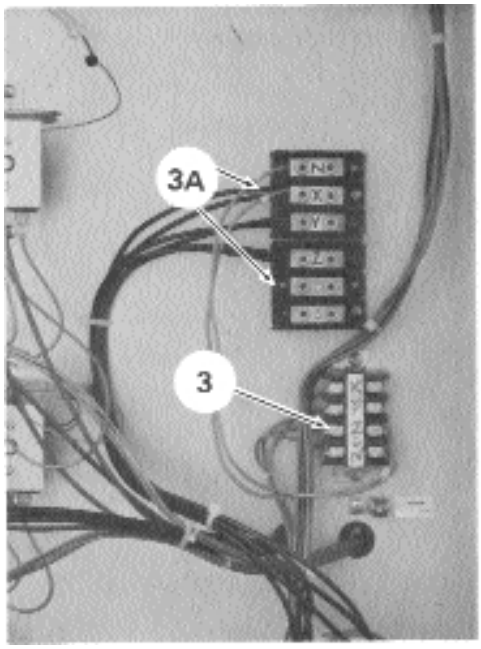
PARTS IDENTIFICATION AND FUNCTION

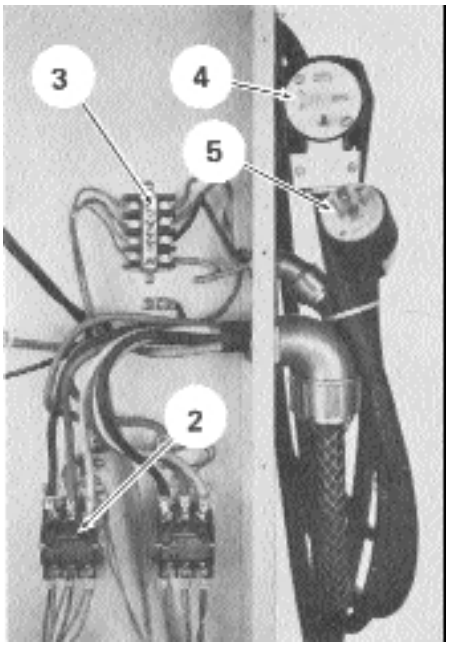
ITEM	PART #	DESCRIPTION	2 CELL QTY.	4 CELL QTY.	6 CELL QTY.	FUNCTION
1	1639700	Master On/Off Switch		1	1	Turns contactors on/off. Red
1 a	1639701	Master On/Off Switch	1			Turns contactors on/off. Amber
2	1637001	Main Contactor	**1	2	2	Connects power to cell fuse.
	1637002	Main Contactor 208/240	1			Connects power to cell fuse.
3	1233901	Terminal Block	1	1	1	115V Junction
3A	1193900	Terminal Block	1	2	2	208V Junction
*4	1718501	Power cord set		2	2	Supplies power to contactors
*5	1718502	Interlock cord set	**1	1	1	Supplies power to Master Power ON/OFF switch
*6	11718503	Power cord set	1			Supplies power to unit

***For U.S.A. models only. ** Used on 2 Packs after June 1993.**



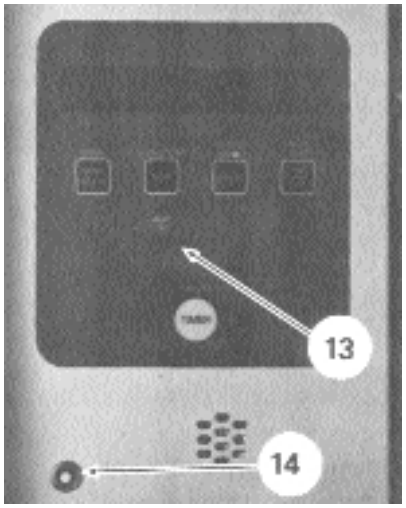


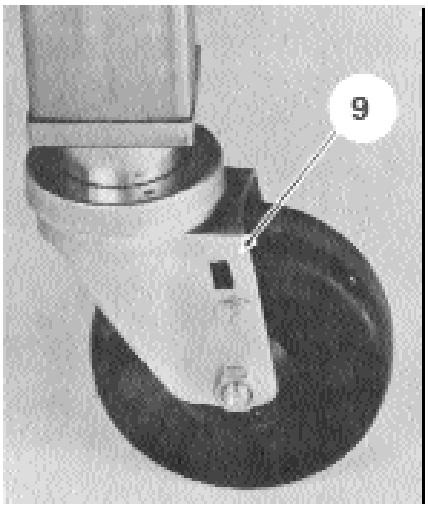


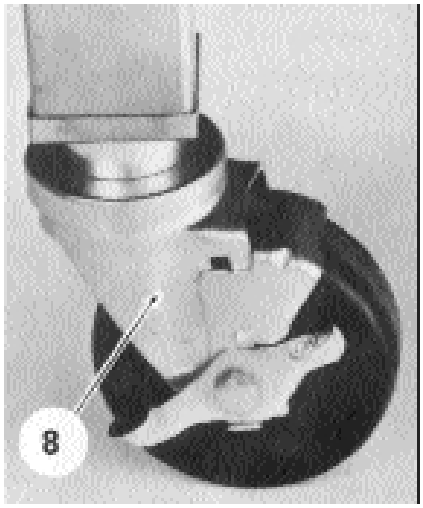


PARTS IDENTIFICATION AND FUNCTION

ITEM	PART #	DESCRIPTION	2CELL QTY.	4 CELL QTY.	6 CELL QTY.	FUNCTION
8	1637700	Lockin Caster	2	2	2	Support base.
9	1637701	Non-Locking Caster	2	2	2	Support base.

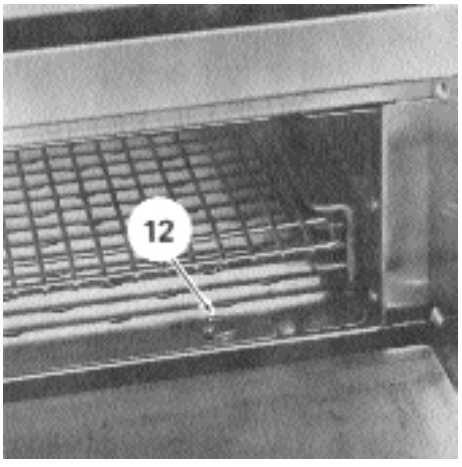


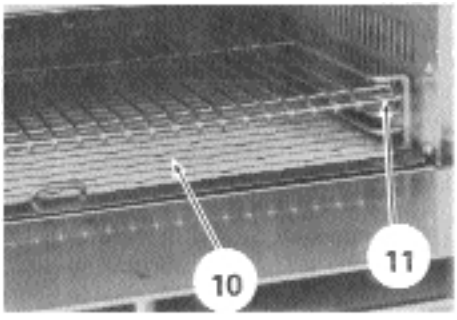


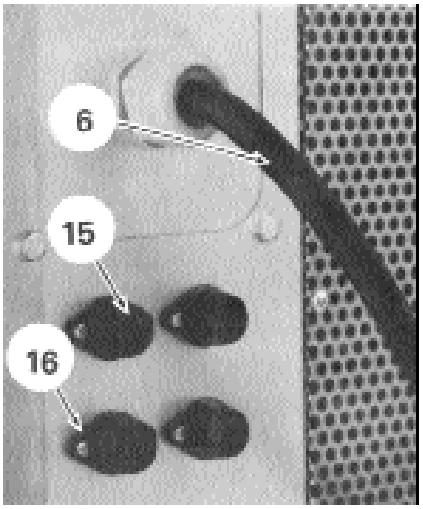


ITEM	PART #	DESCRIPTION	2CELL QTY.	4 CELL QTY.	6 CELL QTY.	FUNCTION
10	1631796	Bottom Jet Plate w uide	2	4	6.	Directs heated air and supports rack.
11	1635000	Rack	2	4	6	Supports product.
12	8005200	1/4Turn Fastener Prior 7/93		8	12	**Secure jet late.
13	1635700	Controller	2	4	6	Controls time and temperature.
	1635708	Rebuilt Controller	2	4	6	Control time and temperature.
14	1635900	Motor Reset Switch		4	6	**Restart Motor
15	1130107	Fuse	4	8	12	Reset Motor
16	1130106	Fuse Holder	4	8	12	Holds Fuse.

**Used Prior to June 1993

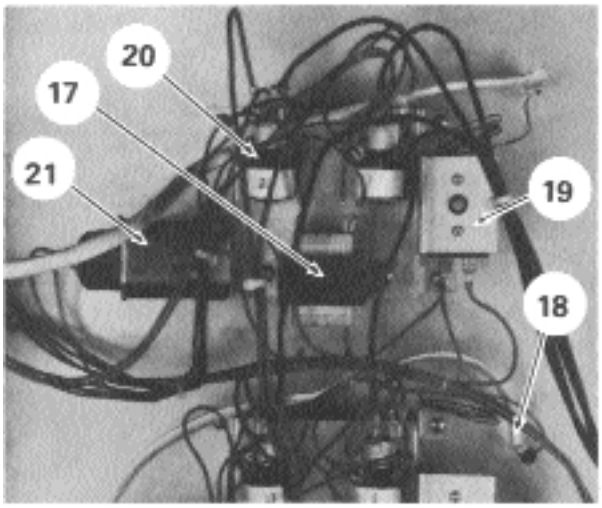




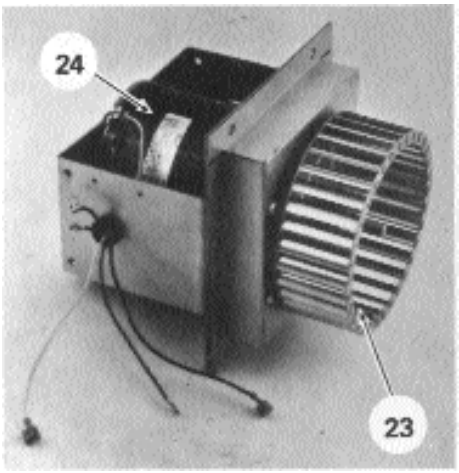


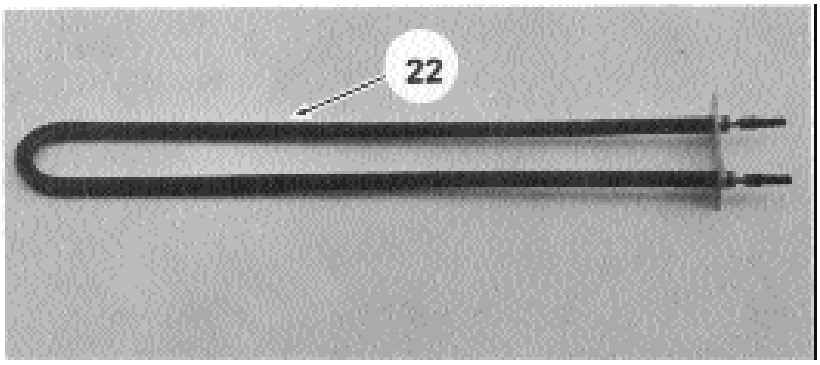
PARTS IDENTIFICATION AND FUNCTION

ITEM	PART #	DESCRIPTION	2CELL QTY.	4 CELL QTY.	6 CELL QTY.	FUNCTION
17	1636000	24VAC Transformer	2	4	6	Provides voltage to 24V control system.
18	1636100	Thermocouple	2	4	6	Monitor oven temperature for control.
19	1682502	Cell Hi-Limit Control	2	4	6	Prevents excessive temperatures
20	1637000	Cell Contactor	4	8	12	Provides voltage to heat elements
21	1636501	Blower Motor Capacitor (only)	2	4	6	



ITEM	PART #	DESCRIPTION	2CELL QTY.	4 CELL QTY.	6 CELL QTY.	FUNCTION
22	1616800	208VAC Heater Element	8	16	24	Heat source. Obs/Avail.
	1616803	208VAC Heater Element	8	16	24	Heat source. Used after 4/29/94
	1616801	40V Heater element	8	16	24	Heat source.
23	1636800	Blower Wheel	2	4	6	Directs air to 'et plates.
24	1636599	Blower Motor Assy.	2	4	6	

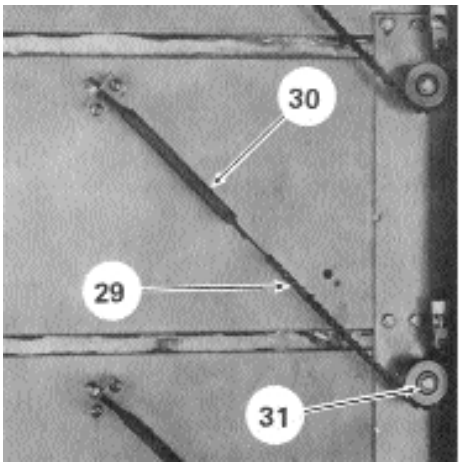


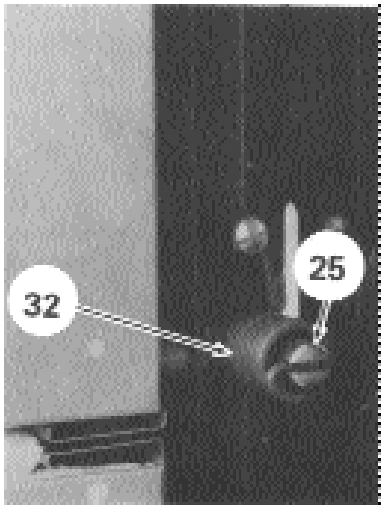


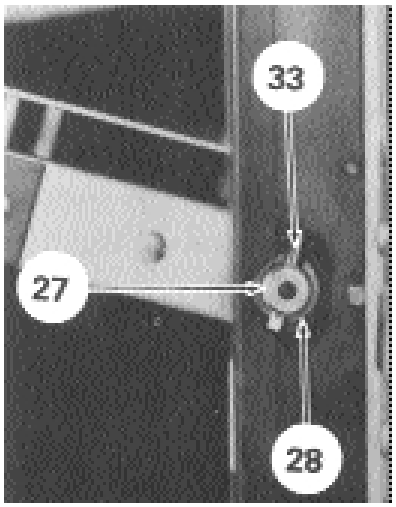
PARTS IDENTIFICATION AND FUNCTION

ITEM	PART #	DESCRIPTION PART #	2CELL QTY.	4 CELL QTY.	6 CELL QTY.	FUNCTION
25	1669395	Door arm left	2	4	6	
26	1633196	Door arm right	2	4	6	Used Prior to April 1993
27	1689397	Door arm right	2	4	6	
28	1054330	Bearing	4	8	12	
29	1639399	Chain w/Conn, Bracket		4	6	Used Prior to April 1993
30	1632601	Door Spring		4	6	Used Prior to April 1993
31	1093001	Roller Bearing		4	6	Used Prior to April 1993
32	1688701	Door Spring	2	4	6	
33	1720201	Dowel Pin	2	4	6	

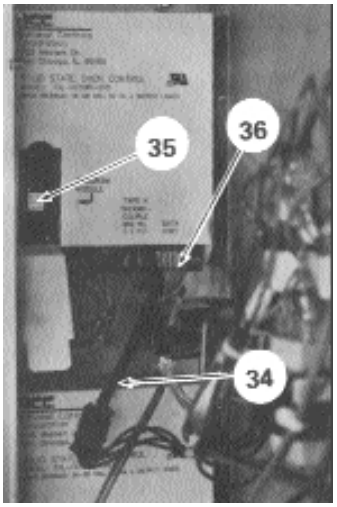
**Used Prior to June 1993

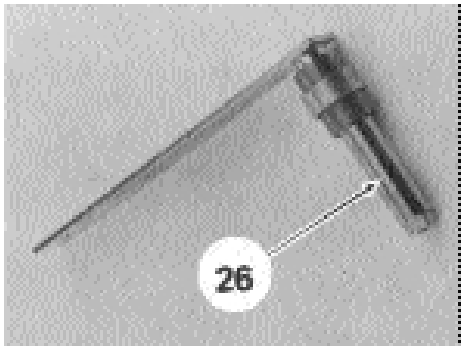






ITEM	PART #	DESCRIPTION	2CELL QTY.	4 CELL QTY.	6 CELL OTY.	FUNCTION
34	1636700	Wire harness NCC Controller	2	4	6	
35	163570*	Program Chip	2	4	6	*Last digit indicate chip version.
36	1652401	Communication Cable	1	1	0	
	1652400	Communication Cable		0	1	





HARDWARE

A	8002106	Sheet metal screw No. 10 x 1/2 Phil. Truss HD. "A"	42
B	8003123	Sheet Screw No. 10-24 x 5/8 Phil. Truss HD.	10
C	8001206	Nut Hex 1/4 - 20	24
D	8003215	Pan HD Slot 1/4 - 20 x 1 3/4 Bolt	6
E	8003109	Mach. Screw No. 10 - 24 x 1 Phil. Truss HD.	16
F	8003600	Carria a Bolt 1/4 - 20 x 1	12
G	8003110	Mach. Screw No. 10 - 24 x 1 1/4 Phil. Truss HD.	2
H	8003500	Shoulder Bolt No. 10-24 x 1/4 Phil. Truss HD.	12

OPERATION

Before First Use

Before the oven cells are used for the first time, they must be cleaned as defined in the Planned Maintenance System Card for this unit. They must also be "Burned?In" to release any odors or residues from the new materials. Operate the oven cells at full cooking temperature (as defined below) for a period of three (3) hours prior to use with food products.

The Master Power (On-Off) Switch - Controls power to all oven cells. This switch must be turned "ON" to start the operation. The switch Telite will be illuminated when the switch is "ON".

Control Switch Operation

On/Switch

- This switch activates/deactivates the heater. When "OFF" is displayed, depressing this switch will activate the displayed menu item (for example - "Personal Pizza"). Depressing this switch for three seconds while in the operation mode will turn the controller "OFF".

Select Switch

- Selects the appropriate menu item for control while in the Operation Mode. Depressing this key will cause the display to scroll through the available menu items programmed.

Temperature Switch

- Displays the actual current internal oven cell temperature. Depressing this switch will cause the display to show the actual current oven cell temperature in degrees Fahrenheit/Celsius for a period of five (5) seconds.

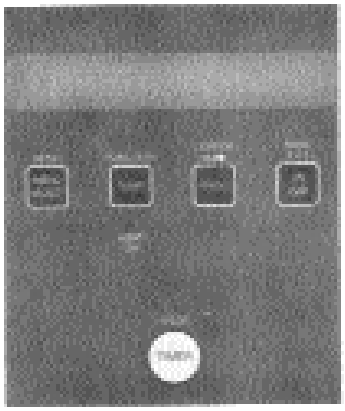
Heat On Indicator

- The indicator will become illuminated when the oven cell temperature falls two degrees below the set point for the displayed menu item; calling for heat.

Timer Switch

- Start/Stops the cooking time cycle. Depressing this switch will cause the display to show the menu item and the time remaining in the cook cycle in minutes (only). Depressing this switch for two seconds during a cooking time cycle will terminate that cycle. This switch must be pressed at the end of the cook time cycle to terminate the "Remove" display and the audible alert.

NOTE - The Timer Switch is disabled if the oven cell temperature is less than 25 degrees Fahrenheit than the set point or 35 degrees Fahrenheit more than the set point of the displayed menu item. Under these conditions, the display will show "TOO COOL" or "TOO HOT" alternately with the menu item.



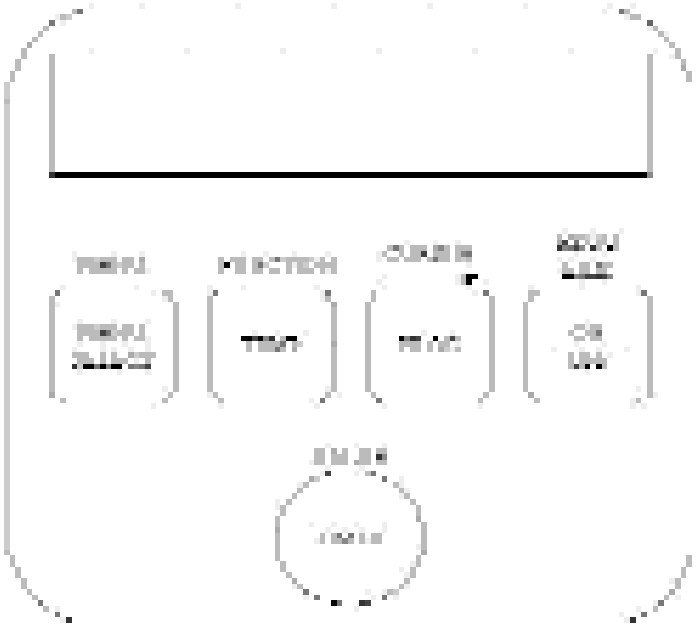
SET - UP

1. Place oven racks in appropriate rack guide position in each oven cell and close all oven cell doors.
2. Turn the Master Power (On/Off) Switch (located on Control Panel) to "ON" position.
3. Verify that Power Telite is illuminated and control panel for each selected oven cell displays "OFF".
4. Press the Master Power (On/Off) Switch (located on the control panel) for each oven cell to be used.
5. Verify that each selected oven cell displays desired menu item and red "Heat On" indicator is illuminated on the control panel.
6. Allow the selected oven cell(s) to pre-heat for 30 minutes and verify that temperature is correct for desired menu item by depressing "Temp" switch on the control panel.

NOTE: A "Too Cool" display alternating with the menu item will be displayed until the cell is up to temperature.

Shut Down

1. Allow all oven cells to operate with no heat (all control panels display "OFF") and doors open for a period of 15 minutes.
2. Allow all oven cells to cool to a temperature below 200° F.
3. Turn the Master Power (On/Off) Switch (located on control panel) to "OFF" position.



PROCEDURE 1
TO PROGRAM THECONTROLLER

NOTE: PROGRAMMING NEEDS TO BE DONE FROM THE MASTER CONTROLLER (TOP CELL)

Tools: None
Parts: None

1. Turn Master Power (On/Off) Switch "ON". Verify that all cell control panels displays "OFF".
2. **PRESS** the **PROG** button in the top cell for two **(2) seconds** to activate the controller in the Program mode. The control panel will display the program identification number.
3. Depress the **MENU** switch to select the menu item to be programmed.
4. Depress the **FUNCTION** switch to select the function to be changed. The cook time function, cook temperature function and top and bottom duty cycle function will be displayed:

REMOVE:	12:15 AIM
COOK TEMP:	360 F/C
DUTY CYCLE TOP:	100%
DUTY CYCLE BOTTOM:	080%

NOTE: ITEMS THAT ARE PRODUCT HEADINGS DO NOT HAVE COOK TIMERS. SEE PAGE 19 FOR A LIST OF PRODUCT HEADINGS AND SUB ITEMS.

5. **PRESS** the **CURSOR** button to select the digit to be modified as indicated by the flashing digit.
6. **PRESS** the **VALUE** button to alter the flashing digit to the desired number.
7. **PRESS** the **MENU SELECT** button until "REMOTE UNIT UPDATE" appears in the display.
8. **PRESS** the **FUNCTION** button until the "TRANSMIT DATA? N" appears in the display.
9. **PRESS** the **VALUE** button to change the flashing "N" to a flashing "Y".
10 **PRESS** the **PROG** button. The top display will say "Transmitting Data", while the other cells display "Recieving Data".

Once the update is complete, the other cell display will read "OFF" and the top display will return to "Remote Unit Update"

11. **PRESS** the **PROG EXIT** switch to exit the programming mode. Verify that the control panel says "OFF".

TO CHANGE THE SET TEMPERATURE (Header, Main, & Sub Menu's)

1. Ensure **ALL** Controllers display **OFF**
2. **PRESS** and **HOLD** the **PROG** button for **(2) two seconds** to activate the controller in the Program Mode. The control panel will display the program identification number.
3. **PRESS** the **MENU SELECT** button to select the menu item to be changed.
4. PRESS the FUNCTION button # time(s) (**See Note following this step**) to obtain COOK TEMP: XXXF.

NOTE: If changing HEADER MENU ITEMS in STEP 4 - Press the FUNCTION button 1X.
If changing MAIN or SUB MENU ITEMS in STEP 4 - Press the FUNCTION button 2X.

5. **PRESS** the **VALUE** button to change the value of the flashing digit.
6. **PRESS** the **CURSOR** button to scroll the flashing digit to the right.
7. **REPEAT** steps 5 & 6 until the desired **COOK TEMP** has been achieved.
8. **PRESS** the **MENU SELECT** button until "REMOTE UNIT UPDATE" appears in the display.
9. **PRESS** the **FUNCTION** button to obtain "TRANSMIT DATA?" with a flashing "N".
10. **PRESS** the **VALUE** button to change the "N" to a flashing "Y".
11. **PRESS** the **PROG** button. The top display will say "Transmitting Data", while the other cells display "Recieving Data".
12. **PRESS** the **PROG EXIT** switch to exit the programming mode. Verify that the control panel says "OFF".

TO CHANGE REMOVE TIME (Main & Sub Menu's ONLY)

1. Ensure **ALL** Controllers display **OFF**
2. **PRESS** and **HOLD** the **PROG** button for **(2) two seconds** to activate the controller in the Program Mode. The control panel will display the program identification number.
3. **PRESS** the **MENU SELECT** button to select the menu item to be changed.
4. **PRESS** the **FUNCTION** button to obtain **REMOVE XX:XXM**.
5. **PRESS** the **VALUE** button to change the value of the flashing digit.
6. **PRESS** the **CURSOR** button to scroll the flashing digit to the right.
7. **REPEAT** steps 5 & 6 until the desired **REMOVE TIME** has been achieved.
8. **PRESS** the **MENU SELECT** button until "REMOTE UNIT UPDATE" appears in the display.
9. **PRESS** the **FUNCTION** button to obtain "TRANSMIT DATA?" with a flashing "N".
10. **PRESS** the **VALUE** button to change the "N" to a flashing "Y".
11. **PRESS** the **PROG** button. The top display will say "Transmitting Data", while the other cells display "Recieving Data".
12. **PRESS** the **PROG EXIT** switch to exit the programming mode. Verify that the control panel says "OFF".

TO CHANGE DUTY CYCLE TOP (Header, Main, & Sub Menu's)

1. Ensure **ALL** Controllers display **OFF**
2. **PRESS** and **HOLD** the **PROG** button for **(2) two seconds** to activate the controller in the Program Mode. The control panel will display the program identification number.
3. **PRESS** the **MENU SELECT** button to select the menu item to be changed.
4. PRESS the FUNCTION button # time(s) (**See Note following this step**) to obtain DUTY CYCLE BOT XXX%.

NOTE: If changing HEADER MENU ITEMS in STEP 4 - Press the FUNCTION button 2X.
If changing MAIN or SUB MENU ITEMS in STEP 4 - Press the FUNCTION button 3X.

5. **PRESS** the **VALUE** button to change the value of the flashing digit.
6. **PRESS** the **CURSOR** button to scroll the flashing digit to the right.
7. **REPEAT** steps 5 & 6 until the desired **DUTY CYCLE** has been achieved.
8. **PRESS** the **MENU SELECT** button until "REMOTE UNIT UPDATE" appears in the display.
9. **PRESS** the **FUNCTION** button to obtain "TRANSMIT DATA?" with a flashing "N".
10. **PRESS** the **VALUE** button to change the "N" to a flashing "Y".
11. **PRESS** the **PROG** button. The top display will say "Transmitting Data", while the other cells display "Recieving Data".
12. **PRESS** the **PROG EXIT** switch to exit the programming mode. Verify that the control panel says "OFF".

TO CHANGE DUTY CYCLE BOTTOM (Header, Main, & Sub Menu's)

1. Ensure **ALL** Controllers display **OFF**
2. **PRESS** and **HOLD** the **PROG** button for **(2) two seconds** to activate the controller in the Program Mode. The control panel will display the program identification number.
3. **PRESS** the **MENU SELECT** button to select the menu item to be changed.
4. PRESS the FUNCTION button # time(s) (**See Note following this step**) to obtain DUTY CYCLE TOP XXX%.

NOTE: If changing HEADER MENU ITEMS in STEP 4 - Press the FUNCTION button 3X.
If changing MAIN or SUB MENU ITEMS in STEP 4 - Press the FUNCTION button 4X.

5. **PRESS** the **VALUE** button to change the value of the flashing digit.
6. **PRESS** the **CURSOR** button to scroll the flashing digit to the right.
7. **REPEAT** steps 5 & 6 until the desired **DUTY CYCLE** has been achieved.
8. **PRESS** the **MENU SELECT** button until "REMOTE UNIT UPDATE" appears in the display.
9. **PRESS** the **FUNCTION** button to obtain "TRANSMIT DATA?" with a flashing "N".
10. **PRESS** the **VALUE** button to change the "N" to a flashing "Y".
11. **PRESS** the **PROG** button. The top display will say "Transmitting Data", while the other cells display "Recieving Data".
12. **PRESS** the **PROG EXIT** switch to exit the programming mode. Verify that the control panel says "OFF".

TO RESTORE FACTORY SETTINGS

1. Ensure **ALL** Controllers display **OFF**
2. **PRESS** and **HOLD** the **PROG** button for **(2) two seconds** to activate the controller in the Program Mode. The control panel will display the program identification number.
3. **PRESS** the **MENU SELECT** button until SERVICE MODE appears in the display.
4. **PRESS** the **FUNCTION** button 1X to access LOAD DEFAULT MENU? with a flashing "N".
5. **PRESS** the **VALUE** button to change the flashing "N" to a flashing "Y".
6. **PRESS** the **PROG** button - Controller will display "RELOADING" - and then return to "SERVICE MODE"
7. **PRESS** the **MENU SELECT** button until "REMOTE UNIT UPDATE" appears in the display.
9. **PRESS** the **FUNCTION** button to obtain "TRANSMIT DATA?" with a flashing "N".
10. **PRESS** the **VALUE** button to change the "N" to a flashing "Y".

11. **PRESS** the **PROG** button. The top display will say “Transmitting Data”, while the other cells display “Recieving Data”.
12. **PRESS** the **PROG EXIT** switch to exit the programming mode. Verify that the control panel says “OFF”.

PROCEDURE NO. 2: TO CALIBRATE THECONTROLLER

Tools: Pronto Temperature Indicator, Pizza Oven Temperature Probe
Parts: None
Note: Heat oven in the Pizza Mode

1. Place the temperature probe in the center of the oven rack.

WARNING: OVEN IS HOT - HAND PROTECTION IS REQUIRED.

2. Heat oven to it's set temperature for a minimum of thirty (30) minutes.
3. **PRESS** the **TEMP** switch when the HEAT ON light (red) comes on. The controller's displayed temperature should match the temperature displayed on the Pronto, within +/five (5) degrees Fahrenheit. If it does, procedure is complete. If not, proceed to step five (5).
4. **PRESS** and **HOLD** the **ON/OFF** button for **two (2)** seconds to turn the desired cell to OFF.
5. **PRESS** and **HOLD** the **PROG** button for two(2) seconds to enter the Programming Mode.
6. **PRESS** the **MENU** button until "Set Calibration" is displayed.
7. **PRESS** the **FUNCTION** button, the display will indicate the current oven temperature CURRENT TEMP - XX.
8. **PRESS** the **CURSOR** button to select the digit to be changed as indicated by a flashing digit.
9. **PRESS** the **VALUE** switch to alter the flashing digit to the desired value and verify that the dis play matches the displayed temperature on the Pronto.
10. **PRESS** the **PROG EXIT** button. Verify that the control panel displays "OFF".
11. Continue steps one (1) through eight (8) for each of the other cells.

PARTS ORDERING / SERVICE INFORMATION

Parts orders must be placed directly with your local GARLAND Authorized Agency/Distributor. To assist you in this process, the following information is required. See Data Plate located top front of top cell control section.

1. MODEL NUMBER:_____
2. WARRANTY SERIAL NUMBER:_____
3. VOLTAGE:_____
4. ITEM PART NUMBER:_____
5. QUANTITY REQUIRED:_____

NOTE: A list of GARLAND Authorized Agents/Distributors was enclosed with the ovens) when shipped from the factory. If you do not have access to this list, please contact the GARLAND Service Department. 1-800-446-8367 Service information may be obtained by calling your local GARLAND Authorized Agents/Distributor or by calling the GARLAND Service Department. When calling, please have the first three items list above in addition to the following information:

6. NATURE OF PROBLEM AND SYMPTOM:_____
7. ANY OTHER INFORMATION:_____

TROUBLESHOOTING GUIDE

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Master power (On/Off) Switch turned on - Power Telite is not lit.	A. The ventilation hood circuit breaker is turned off. B. Power cord is unplugged. C. Defective Master Power Switch.	A. Turn ventilation hood circuit breaker on. B. Connect Power Supply. C. Replace Master Power Switch.*
Master power (On/Off) Switch turned on - Telite is "ON", but no power at any individual cell controllers	A. Power cord(s) is/are unplugged.	A. Reconnect power supply.
Master power (On/Off) Switch turned on - Telite is "ON", but no power at any pairs of cells (i.e. - Top 2, Center 2, Bottom 2).	A. Main Power Supply Breaker tripped. B. Power Cord unplugged. C. Main Contactor defective	A. Reset Breaker. B. Reconnect power supply. C. Replace main contactor.
Master power (On/Off) Switch turned on. One (1) cell fails to operate - no display at Controller, no Blower Motor and no heat.	A. No power to the controller.	A. Call for service.
All Power switches are "ON". Cell(s) fail to produce heat.	A. Controller displays "OFF"	A. Press On/Off Switch. B. Call service agency
Blower Motor not working.	A. Fuse blown.	A. Call for service.
Noisy Blower Motor.	A. Foreign object is blower motor housing. B. Blower wheel loose. C. Bearing noise/defective motor.	A. Inspect and Clean. B. Tighten wheel. C. Replace Blower Motor.
Slow starting blower motor - blower motor hums.	A. Capacitor weak and/or defective. B. Motor bearings binding.	A. Replace motor capacitor. B. Replace blower motor.
All Power switches are "ON", motor runs, no controller display.	A. Controller defective. B. 24VAC Transformer defective.	A. Replace controller. B. Replace transformer.
Poor top heat and/or poor bottom heat.	A. Cell contactor defective. B. Controller defective. C. Defective element(s)	A. Replace contactor. B. Replace Controller. C. Replace elements.
Erratic temperatures.	A. Controller defective. B. Thermocouple(s) defective.	A. Replace Controller. B. Replace thermocouple.
Controler displays "High Limit"	A. Controller defective. B. Cell contactor(s) defective.	A. Replace Controller. B. Replace Contactor.
Timer fails to count down.	A. Oven not up to proper temperature. B. Controller defective.	A. Wait for heater telite to go out. B. Replace Controller.
Controler displays "Probe Error"	A. Thermocouple not connected to controller. B. Thermocouple defective.	A. Reconnect. B. Replace thermocouple.
Controller displays "Remotes Need Update"	A. Failed to complete programming procedure. B. Noise in circuit.	A. Continue programming. See Page 12, Procedure 1, Step 7. B. Turn unit off for 10 seconds, then turn unit back on.
* See Non Scheduled Maintenance		

CONTROLLER PRODUCT SETTINGS

MENU	PROGRAM NAME	BAKE TIME	SET TEMP		HEATER DUTY CYCLE (%)	
			F	C	TOP	BOTTOM
HEADER	**FAMILY PIZZA**		500	260	100%	100%
SUB	CHEESE	4:25 M	500	260	70%	40%
SUB	PEPPERONI	4:40 M	500	260	70%	40%
SUB	SAUSAGE	4:40 M	500	260	70%	40%
SUB	DELUXE	5:00 M	500	260	70%	40%
HEADER	**FAMILY PROMO**		150	66	0%	0%
SUB ***	ONE FAMILY PROMO	0:00 M	150	66	0%	0%
SUB ***	TWO FAMILY PROMO	0:00 M	150	66	0%	0%
HEADER	**PERSONAL PIZZA**		500	260	100%	100%
SUB	ONE PEPPERONI	4:00 M	500	260	80%	100%
SUB	TWO PEPPERONI	4:15 M	500	260	80%	100%
SUB	THREE PEPPERONI	4:30 M	500	260	80%	100%
SUB	ONE DELUXE	4:15 M	500	260	80%	100%
SUB	TWO DELUXE	4:30 M	500	260	80%	100%
SUB	THREE DELUXE	4:45 M	500	260	80%	100%
MAIN	**MUFFINS**	33:00 M	315	157	30%	70%
MAIN ***	**COOKIES**	0:00 M	375	191	70%	70%
HEADER	**BAKED PIES**		425	218	60%	0%
SUB	4 - 8 PIES	11:00 M	425	218	60%	0%
SUB	9 - 12 PIES	13:00 M	425	218	60%	0%
MAIN	**MCWRAP**	0:40 M	650	343	100%	100%
MAIN ***	**TEST MENU - 1**	0:00 M	150	66	0%	0%
MAIN ***	**TEST MENU - 2**	0:00 M	150	66	0%	0%
MAIN ***	**TEST MENU - 3**	0:00 M	150	66	0%	0%

*** PROGRAMS WITH A 0:00 M BAKE TIME ARE DISABLED IN THE CONTROLLER AND THEREFORE DO NOT APPEAR IN THE NORMAL OPERATING MODE.

NON-SCHEDULED MAINTENANCE

WARNING: Before performing any maintenance on your multi-purpose oven, you must disconnect the electrical power supply.

Note: Once power cables are disconnected, it is recommended that they be marked in such a way to facilitate reconnection, Re: Upper/Lower pair/set.

ACCESS LOCATION OF REPLACEABLE COMPONENTS - A, B, C

Location A

Motor, blower wheel, heater elements: Remove main back panel by unscrewing fourteen (14) Phillips screws.

Location B

Left door stop and door spring: Remove left body side by unscrewing two (2) screws each from top and bottom of left side and three (3) screws from main back.

Location C

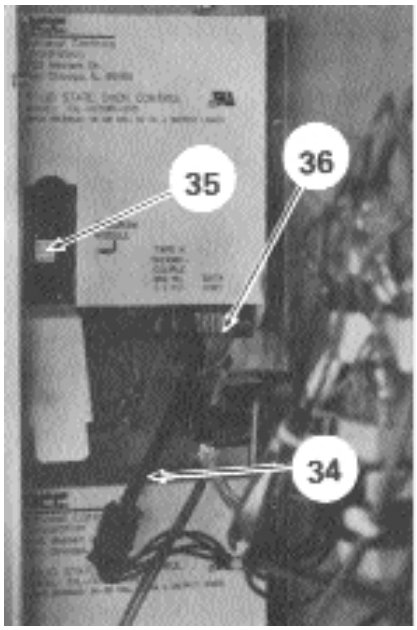
Controller, cell contactors, 24V transformer, thermocouple, master power switch, cell fuse holder, terminal block, main contactors, motor capacitor, hi?limit: Remove right body side by unscrewing three (3) screws each from top and bottom of right side and three (3) screws from main back.

PROCEDURE NO. 1: TO REPLACE THECONTROLLER

WARNING: Should be accomplished by a qualified service person.

TOOLS: **No. 2 Phillips screwdriver, (3/8" deep socket), small slotted screwdriver.**
PARTS: **Controller No. 1635700(R) Item 15**

1. See access Location C.
2. Remove communication ? link cable.
3. Disconnect red and yellow thermocouple leads.
4. Unplug six (6) pin connector.
5. Unscrew four (4) No. 10?24 nuts.
6. Reverse procedure to install new controller.



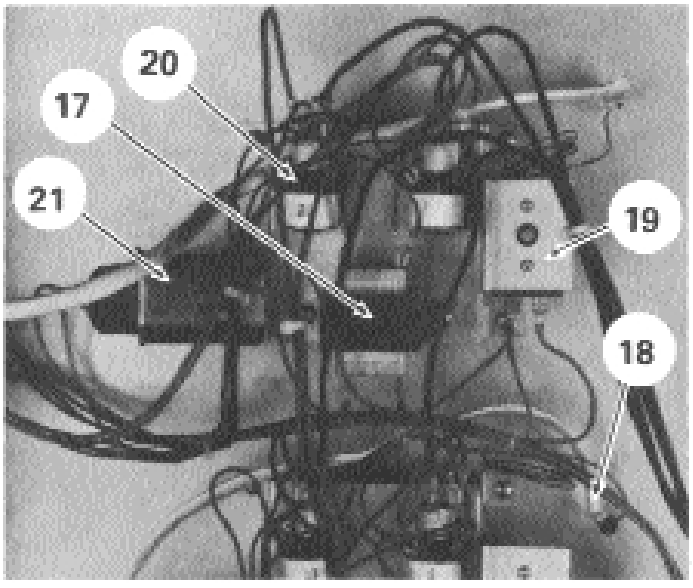
PROCEDURE NO. 2: TO REPLACE CELL CONTACTOR

WARNING: Should be accomplished by a qualified service person.

TOOLS: Phillips screwdriver

PARTS: Cell contactor No. 1637000 Item 20

1. See access Location C.
2. Remove four (4) spade terminals from contac tor noting location.
3. Unscrew contactor from mount plate.
4. Remove contactor from mount plate.
5. Reverse procedure to install new contactor.



PROCEDURE NO. 3:
TO REPLACE 24 VOLT TRANSFORMER

WARNING: Should be accomplished by a qualified service person.
Tools: Phillips screwdriver
Parts: 24 V Transformers No. 1636000
Item 17

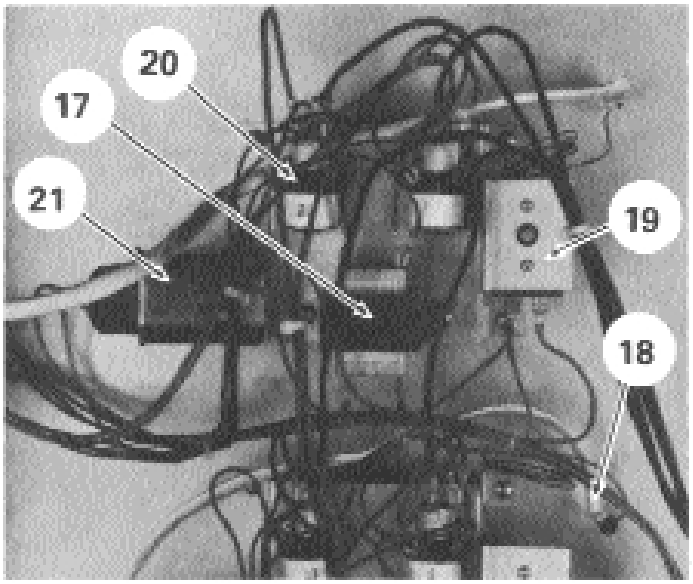
1. See access Location C.
2. Remove five (5) lead noting location.
3. Remove one (1) screw from mount plate.
4. Reverse procedure to replace 24V transformer.

PROCEDURE NO. 4:
TO REPLACE HI-LIMIT CONTROL

WARNING: Should be accomplished by a qualified service person.

Tools: Phillips screwdriver
Parts: Hi-Limit Control No.1683502 Item 19

1. See access Location C.
2. Open cell door. See perforated panel in rear of cell.
3. Remove two (2) screws from rear pane.
4. Release upper capillary from bulb clips.
5. Gently pull capillary through oven sides.
6. Remove hi?limit-mounting screws.
7. Reverse procedure to replace new hi-limit.
8. Ensure spacers are re-installed on rear panel mounting screws



PROCEDURE NO. 5:
TO REPLACETHERMOCOUPLE

WARNING: Should be accomplished by a qualified service person.

Tools: Phillips screwdriver, Straight screwdriver
Parts: Thermocouple No. 1636100 Item 18

1. See access Location C.
2. Open cell door. See perforated rear panel.
3. Remove (2) screws from rear panel. See thermo couple mount clips.
4. Release thermocouple from mount clips.
5. Gently pull thermocouple through oven side right.
6. Release red (?) and yellow (+) leads from con troller.
7. Reverse procedure to replace new thermocouple.
8. Ensure spacers are reinstalled on rear panel mounting screws

PROCEDURE NO. 6:

TO REPLACE MOTOR RESET SWITCH

WARNING: Should be accomplished by a qualified service person.

Tools: Phillips screwdriver, 9/64" Drill Bit, Drill
Parts: Kit No. CK5000 - includes: motor reset bracker #175830, #10 x 1/2" Sheet metal screws, 3/8" Plug Button

As most motor reset failures involve the breaking of the stem and not the failure of the component, this kit will allow you to mount the motor reset inside the control box leaving no possibility for physical damage. Please follow these steps:

1. See access Location C.
2. Unplug all cordsets from the wall sockets.
3. Remove right body side.
4. Locate broken motor reset and attach it to new motor reset bracket using stem nut on motor reset.
5. Locate bracket and motor reset on wall of control box away from the controller.
6. Drill two 9/64" diameter holes.
7. Install plug button in existing hole in the front panel.
8. Attach body side and plug all cordsets in wall outlet.
9. Test unit for proper operation.

In the event the motor reset stem is too short to attach it to the bracket, a new motor reset (PN1635900) must be installed.

PROCEDURE NO. 7:
TO REPLACE BLOWER MOTOR ASSY OR BLOWER WHEEL

WARNING: Should be accomplished by a qualified service person.

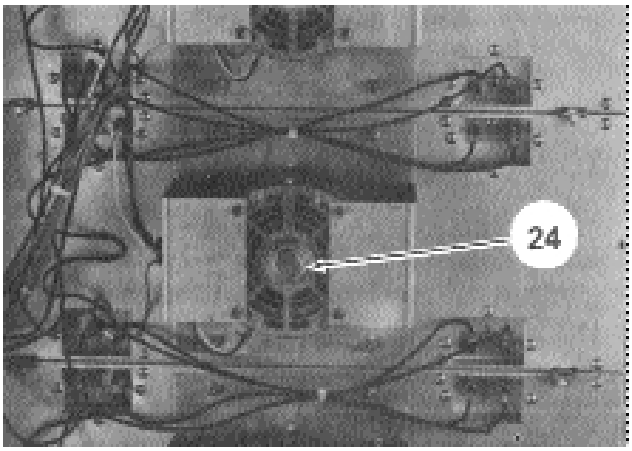
Tools: Phillips screwdriver, 7/16" Socket
5/32 Allen Key

Parts: Blower Motor Assy., No.1636599
Item 24, Blower Wheel
No. 1636800 Item 23

1. See access Location A & C.
2. Disconnect wires: Black and white noting location. Also remove wires from motor capacitor.
3. Unscrew four (4) ¼" - 20 nuts.
4. Pull entire motor/blower assembly from rear.
5. Blower wheel removal by releasing 5/32 Allen screws.

***NOTE** - Blower wheel must be spaced from the motor body of 5/16 inch.

6. Reverse procedure to replace new motor/blower wheel.

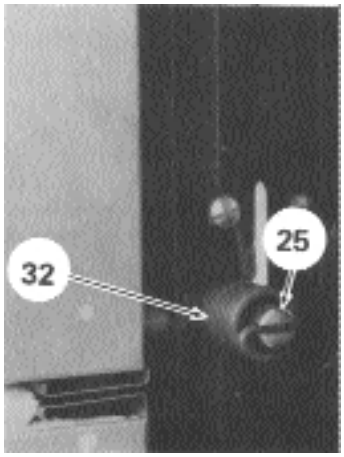


PROCEDURE NO. 8:
TO ADJUST OR REPLACE DOOR SPRING, SLEEVE ASSY. OR DOOR STOP ON 4'S & 6'S BUILT AFTER 4/23/93

WARNING: Should be accomplished by a qualified service person.

Tools: Phillips screwdriver, Straight screwdriver, 7/16" wrench
Parts: Door spring No. 1688701, Item 18

1 Remove left body side by unscrewing (2) two screws each from top and bottom of left side and (3) screws from main back.
2 Remove left corner column; a) open all cell doors. b) remove (2) screws from inner left side of cell opening.
3. See door rod and door spring. Remove slotted that is securing door spring.
4 Slide door spring off door rod.
5 Reinstall door spring.
6 Adjustment of spring tension can be accomplished by using one of the other three holes in front frame.
7. To reinstall reverse steps 1 through 4.



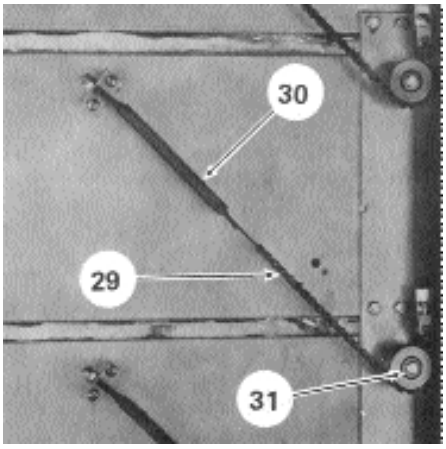
PROCEDURE NO. 9:
TO ADJUST OR REPLACE DOOR SPRING, SLEEVE ASSY. OR DOOR STOP W/CHAINON 4'S & 6'S BUILT PRIOR 4/23/93

WARNING: Should be accomplished by a qualified service person.

Tools: Phillips screwdriver, Straight screwdriver, 7/16" wrench

Parts: Door spring No. 1688601, Item ??, Roller Bearing No. 1093001 Item 29, Chain Assy. No. 1639399 Item 27

1 See access Location B.
2 Mechanical function of these components self evident.
3. Adjust spring tension by tightening 1/4"-20 nut.
4. Lock in place with jam num.



PROCEDURE NO. 11:
TO REPLACE DOOR ASSEMBLY

WARNING: Should be accomplished by a qualified service person.

Tools: No. 2 Phillips screwdriver
Parts: Door assembly No. 1632993

Open door.
Remove three screws on each side of door carefully removing door handle.

1 Open door.
2 Remove three screws on each side of door carefully removing door handle.
3 Slide door off door arms.
4 Reverse procedure to replace door.

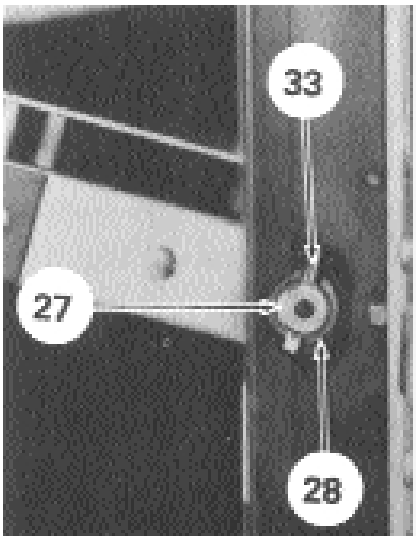
PROCEDURE N0.12:
TO REPLACE BUSHING

WARNING: Should be accomplished by a qualified service person.

Tools: No.2 Phillips screwdriver, 9/16" wrench, Hammer, Pin Driver

Parts: Bushing No. 1054330 Item ??, "* Allen wrench.

1, See access Location B.
2, Remove door as previous instructions.
3. Remove lift side panel (see access location B).
4 Remove 9/16" bolt on doorstop flange and note position for reinstallation.
5 Slide pivot shaft and door arm left and out of bushing. **On unit built after 4/93 use an alien wrench and remove lock bolt from center of door rod. Remove Dowel pin.
6. With drive pin and hammer, tap bushing around circumference until removed.

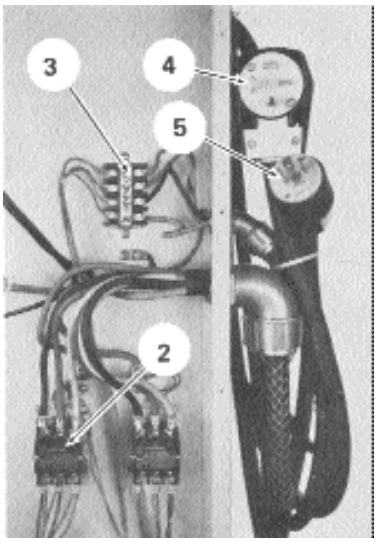


PROCEDURE NO. 13: TO REPLACE MAIN CONTACTOR

WARNING: Should be accomplished by a qualified service person.

Tools: Phillips screwdriver, Slotted screwdriver
Parts: Main contactor No. 1637001 Item 4

1. See access Location C.
2. Remove wires from contactor noting location.
3. Remove two (2) screws and lift off contactor.
4. Reverse procedure to replace new contactor.



PROCEDURE N0.14:
TO REPLACE THE PROGRAM CHIP

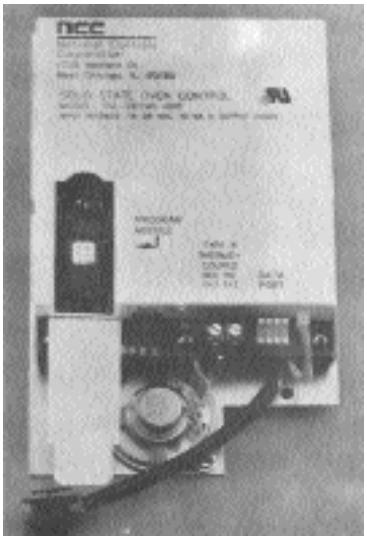
WARNING: Should be accomplished by a qualified service person.

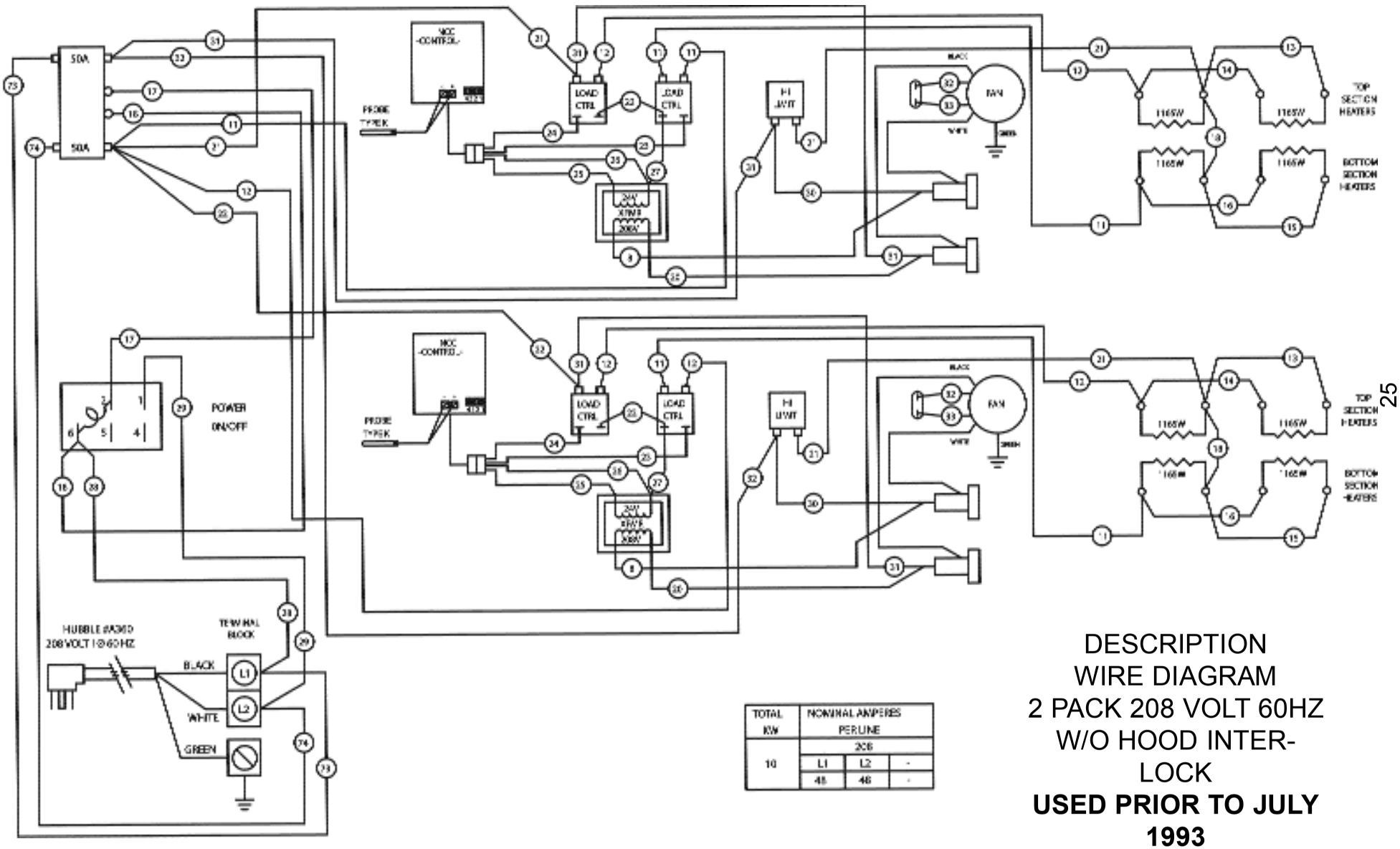
Tools: Phillips screwdriver
Parts: Program Chip No. 163570*

1 See access Location C for access cover.
2 Open access cover on rear of selected controller.
3. Placing your index finger and thumb on the oppo site tabs of the program chip carrier, lift the program chip from the controller.
4. Place the new program chip in the same location; ensuring that the carrier is fully seated.

***NOTE:** ALL PROGRAM CHIPS MUST BE OF THE SAME VERSION.

5. Close the access cover on the controller.

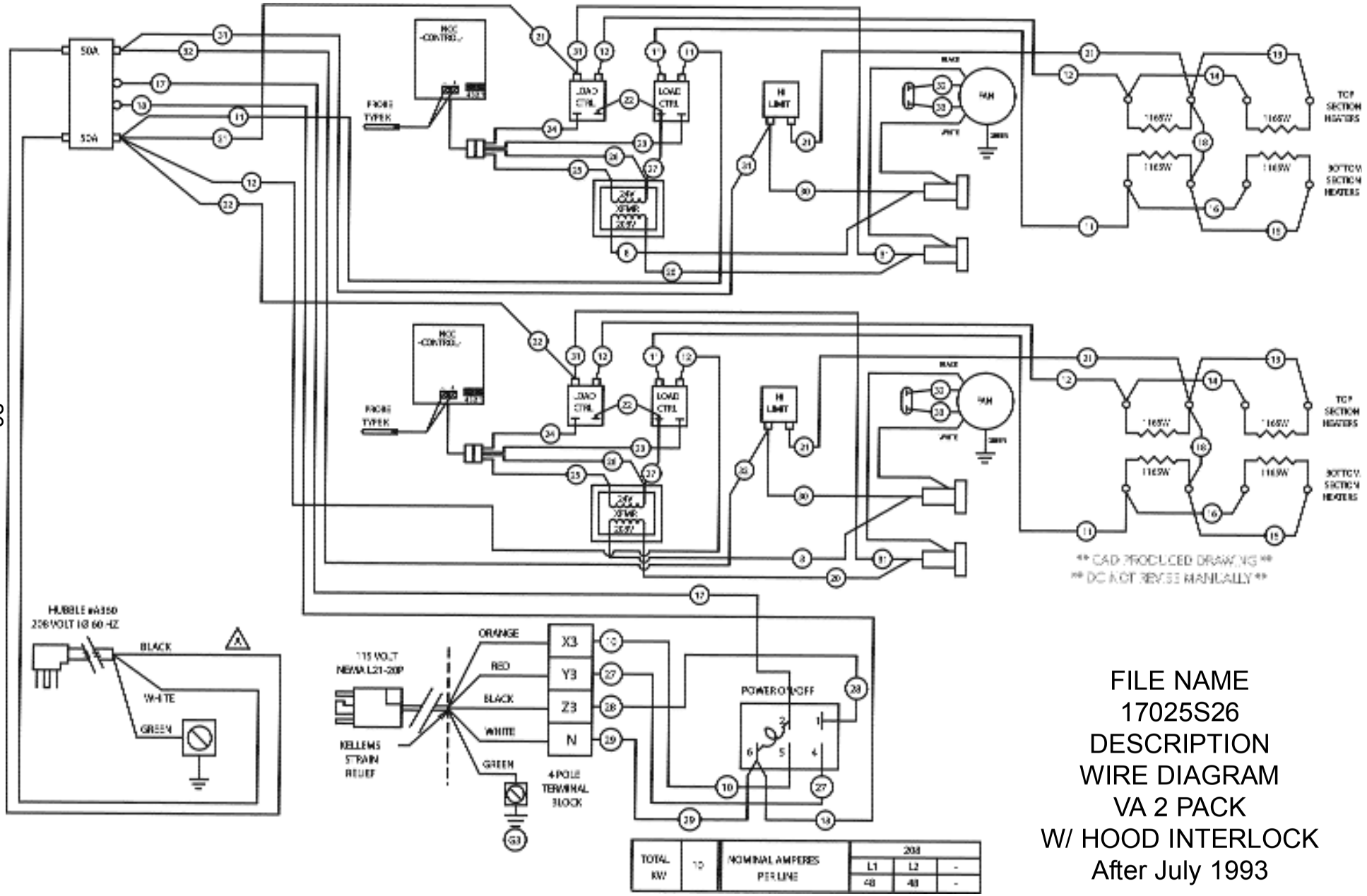




TOTAL KW	NOMINAL AMPERES PER LINE		
	208		
10	L1	L2	-
	48	48	-

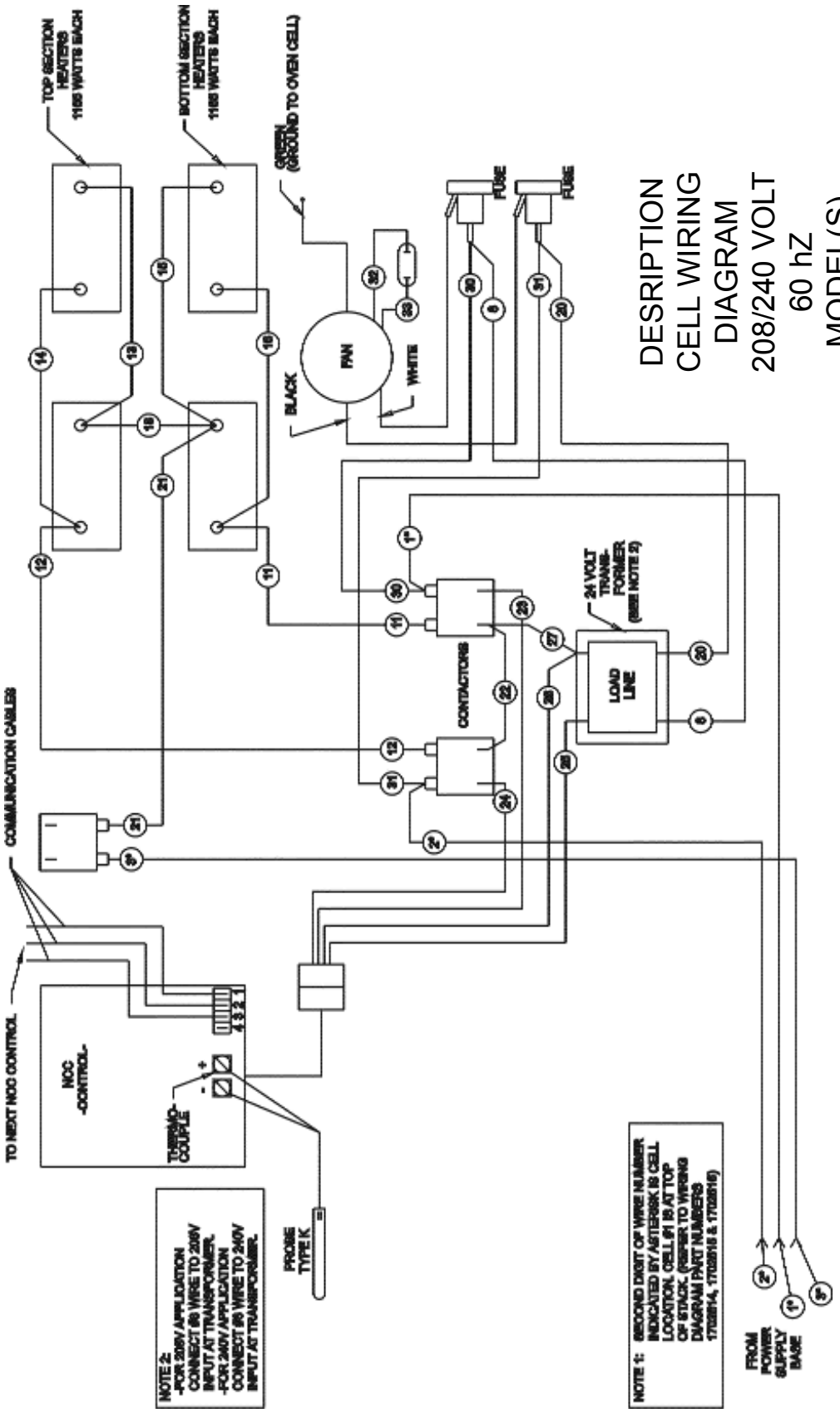
DESCRIPTION
WIRE DIAGRAM
2 PACK 208 VOLT 60HZ
W/O HOOD INTER-
LOCK
USED PRIOR TO JULY
1993
FILE NAME
17025S25

25

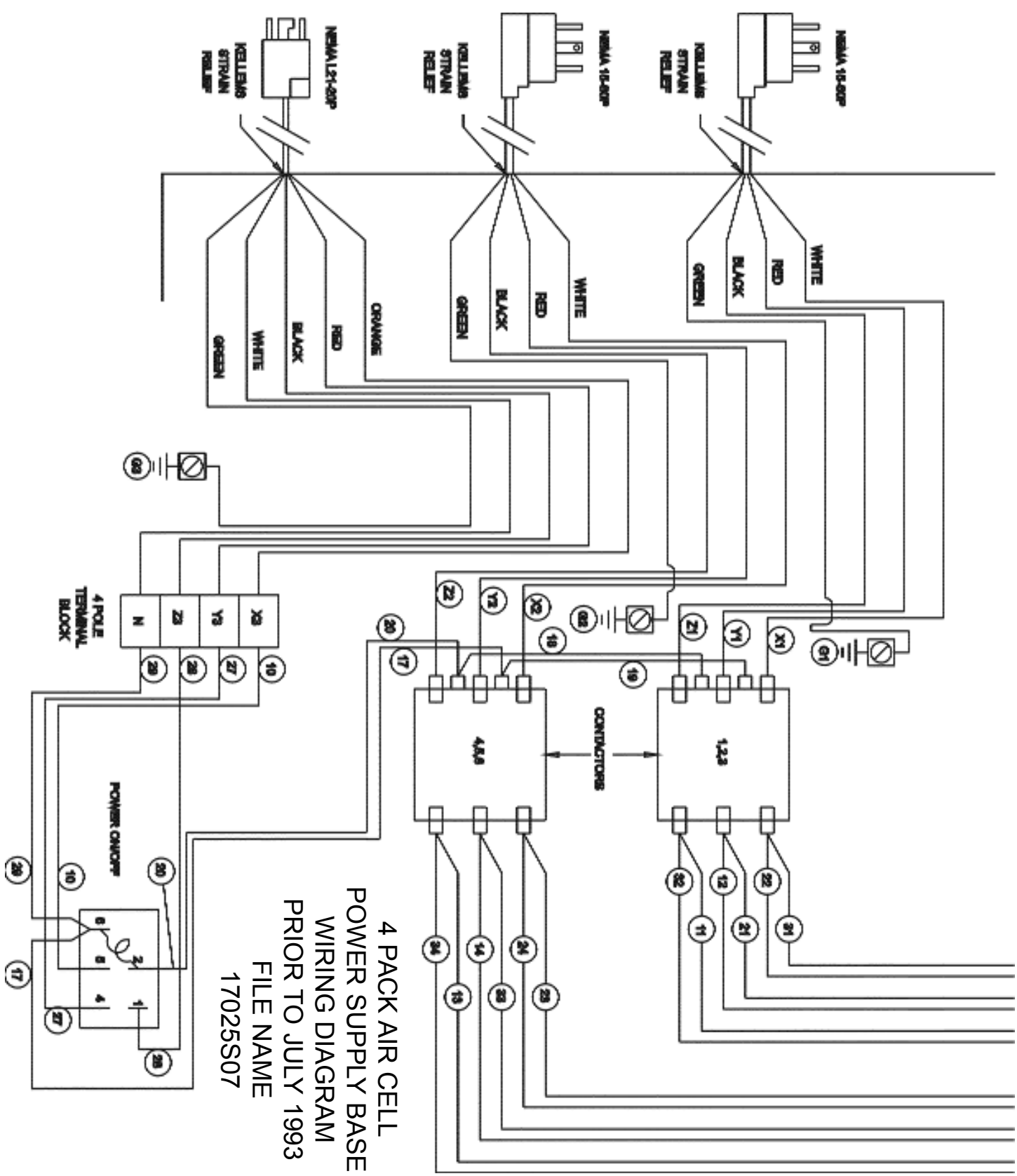


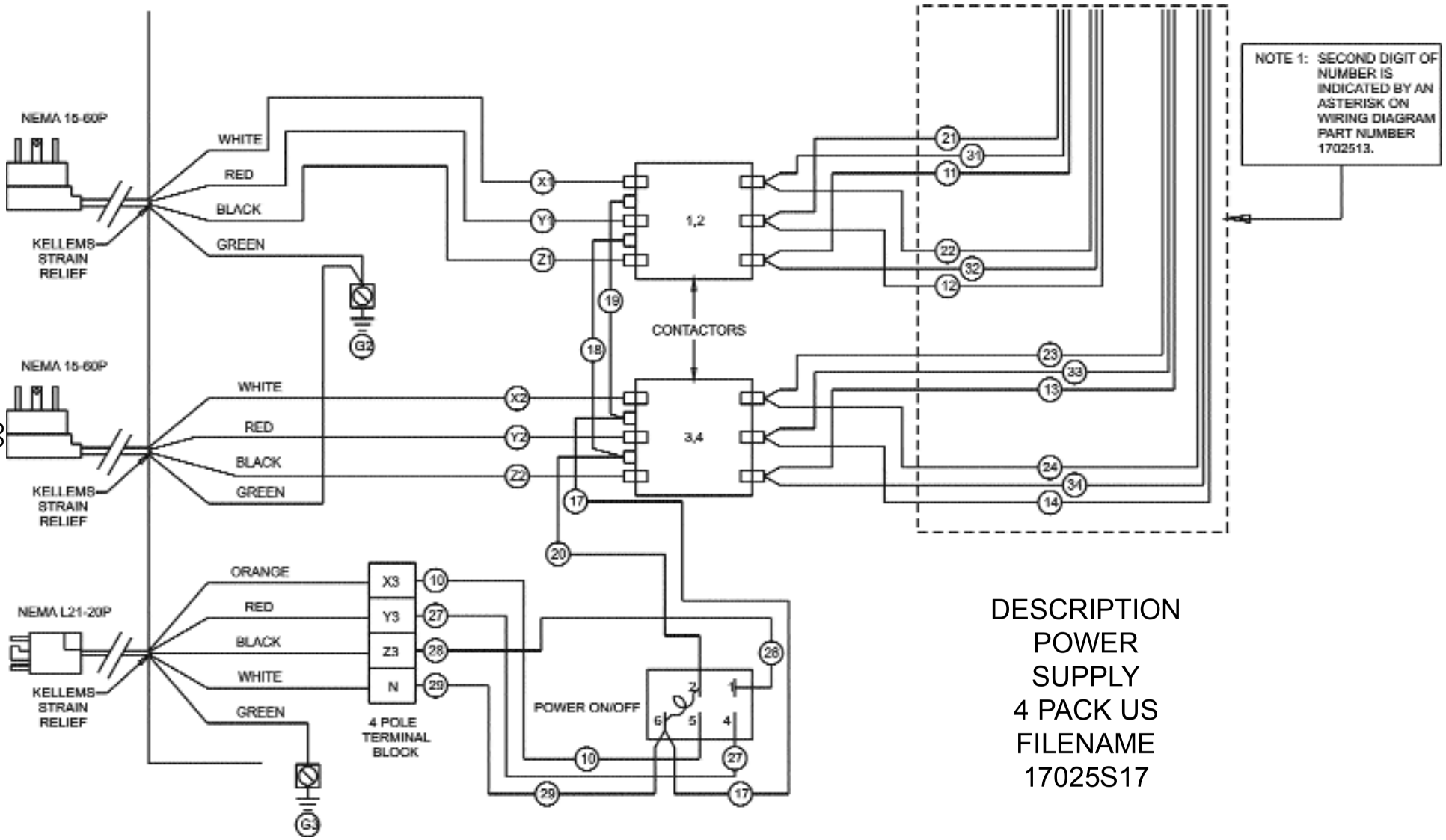
FILE NAME
17025S26
DESCRIPTION
WIRE DIAGRAM
VA 2 PACK
W/ HOOD INTERLOCK
After July 1993

DESRIPTION
CELL WIRING
DIAGRAM
208/240 VOLT
60 hZ
MODEL(S)
AIR CELL
FILE NAME
17025S13

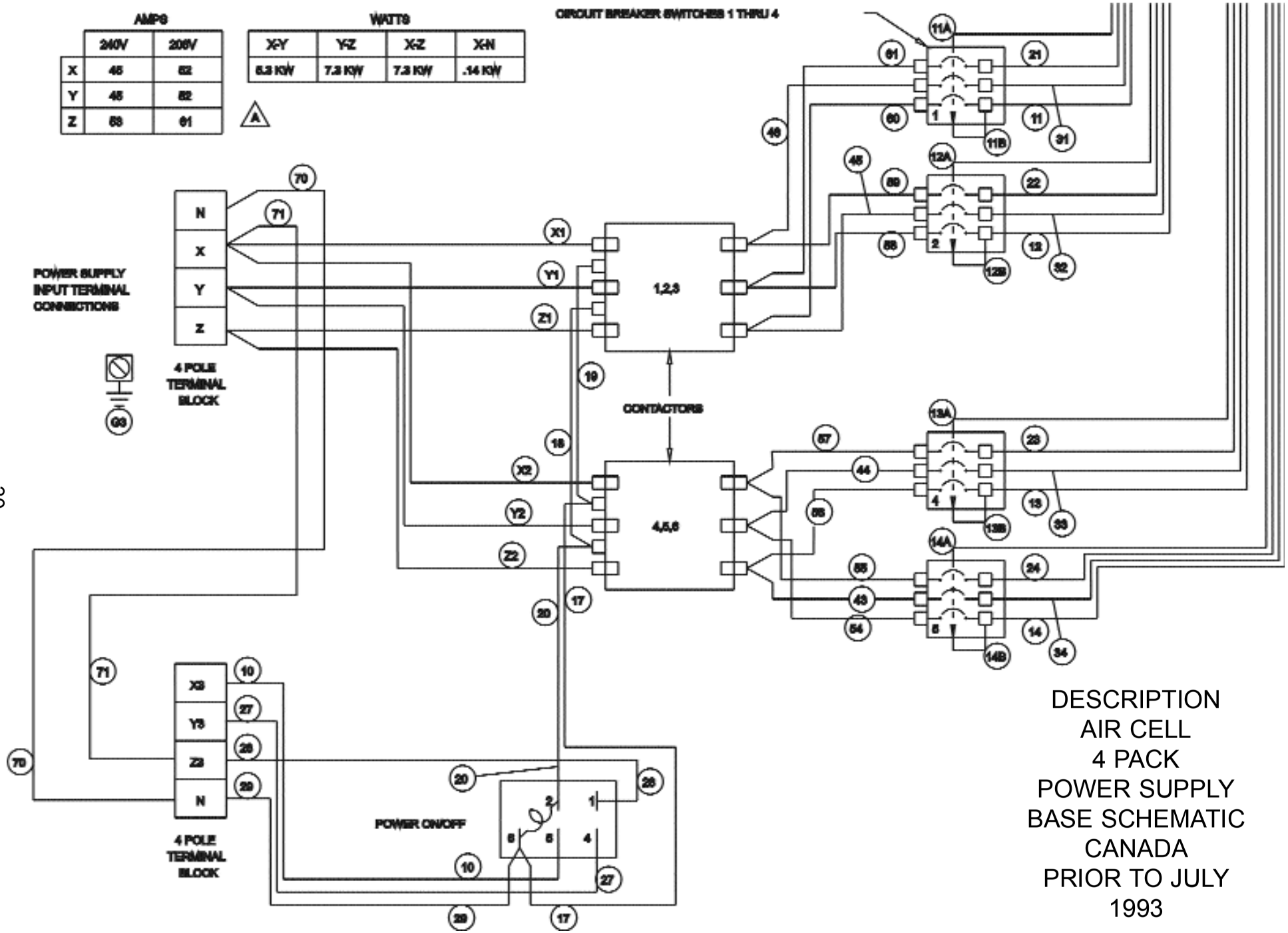

TOP SECTION HEATERS 1165 WATTS EACH
BOTTOM SECTION HEATERS 1165 WATTS EACH
GREEN (GROUND TO OVEN CELL)
FUSE
FUSE
FAN
BLACK
WHITE
24 VOLT TRANS-FORMER (SEE NOTE 2)
CONTACTORS
LOAD LINE
COMMUNICATION CABLES
TO NEXT NDC CONTROL
NDC -CONTROL-
THERMO-COUPLE
PROBE TYPE K
NOTE 2: -FOR 208V APPLICATION CONNECT #6 WIRE TO 208V INPUT AT TRANSFORMER. -FOR 240V APPLICATION CONNECT #6 WIRE TO 240V INPUT AT TRANSFORMER.
NOTE 1: SECOND DIGIT OF WIRE NUMBER INDICATED BY ASTERISK IS CELL LOCATION. CELL #1 IS AT TOP OF STACK. (REFER TO WIRING DIAGRAM PART NUMBERS 17028114, 17028115 & 17028116)
FROM POWER SUPPLY BASE

TOTAL KW	AMPERES SINGLE PHASE		THREE PHASE KW/PHASE			NOMINAL AMPERES PER LINE 3					
	208	240	X-Y	X-Z	Y-Z	208			240		
5			2.33	0.34	2.33	X	Y	Z	X	Y	Z
						11	19	11	10	17	9.5

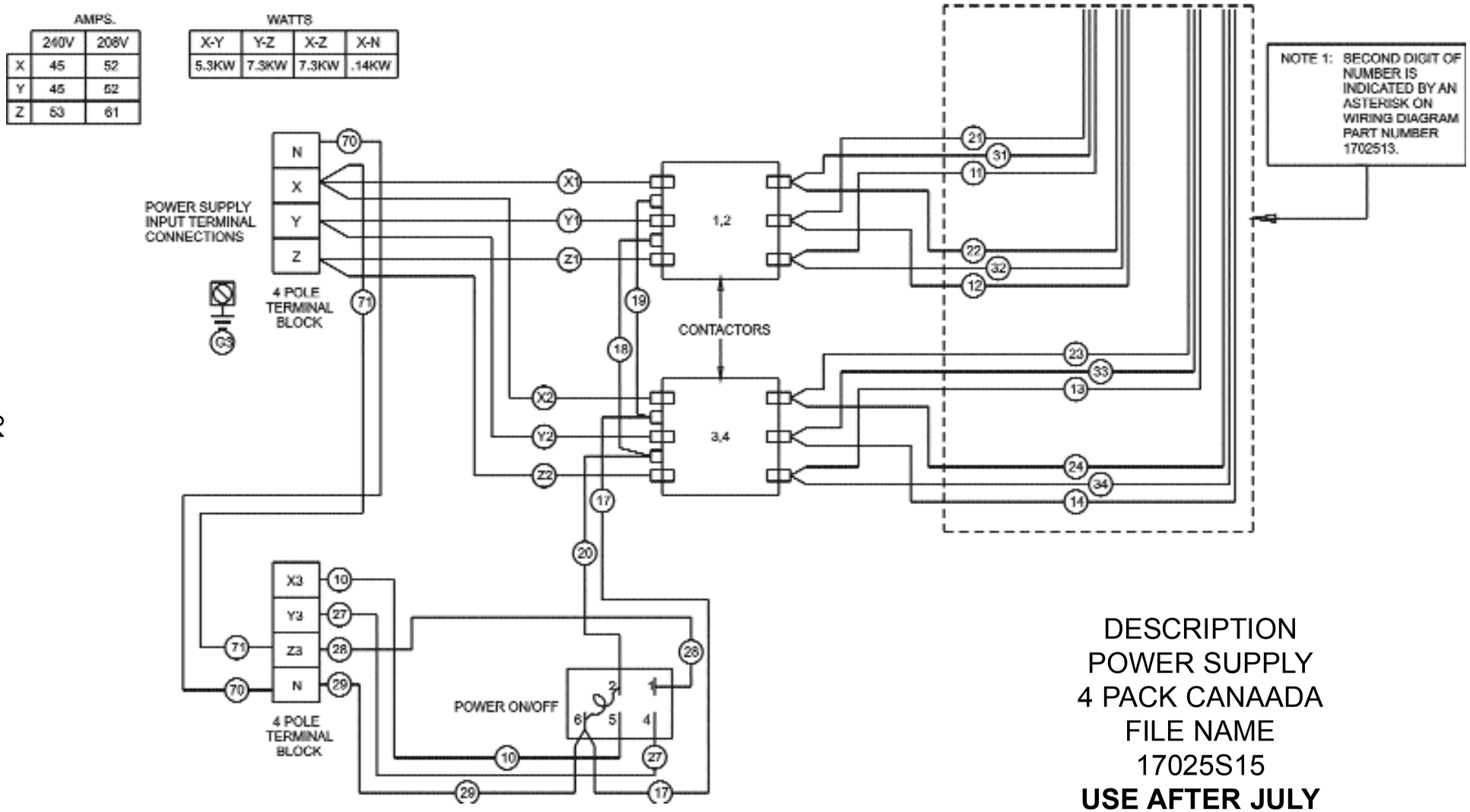

NEMA 15-30P
KELLEMS STRAIN RELIEF
NEMA L21-30P
WHITE
RED
BLACK
GREEN
ORANGE
4 POLE TERMINAL BLOCK
X3
Y3
Z3
N
X2
Y2
X1
Y1
CONTACTORS
4,5,6
1,2,3
POWER ON/OFF
4 PACK AIR CELL
POWER SUPPLY BASE
WIRING DIAGRAM
PRIOR TO JULY 1993
FILE NAME
17025S07



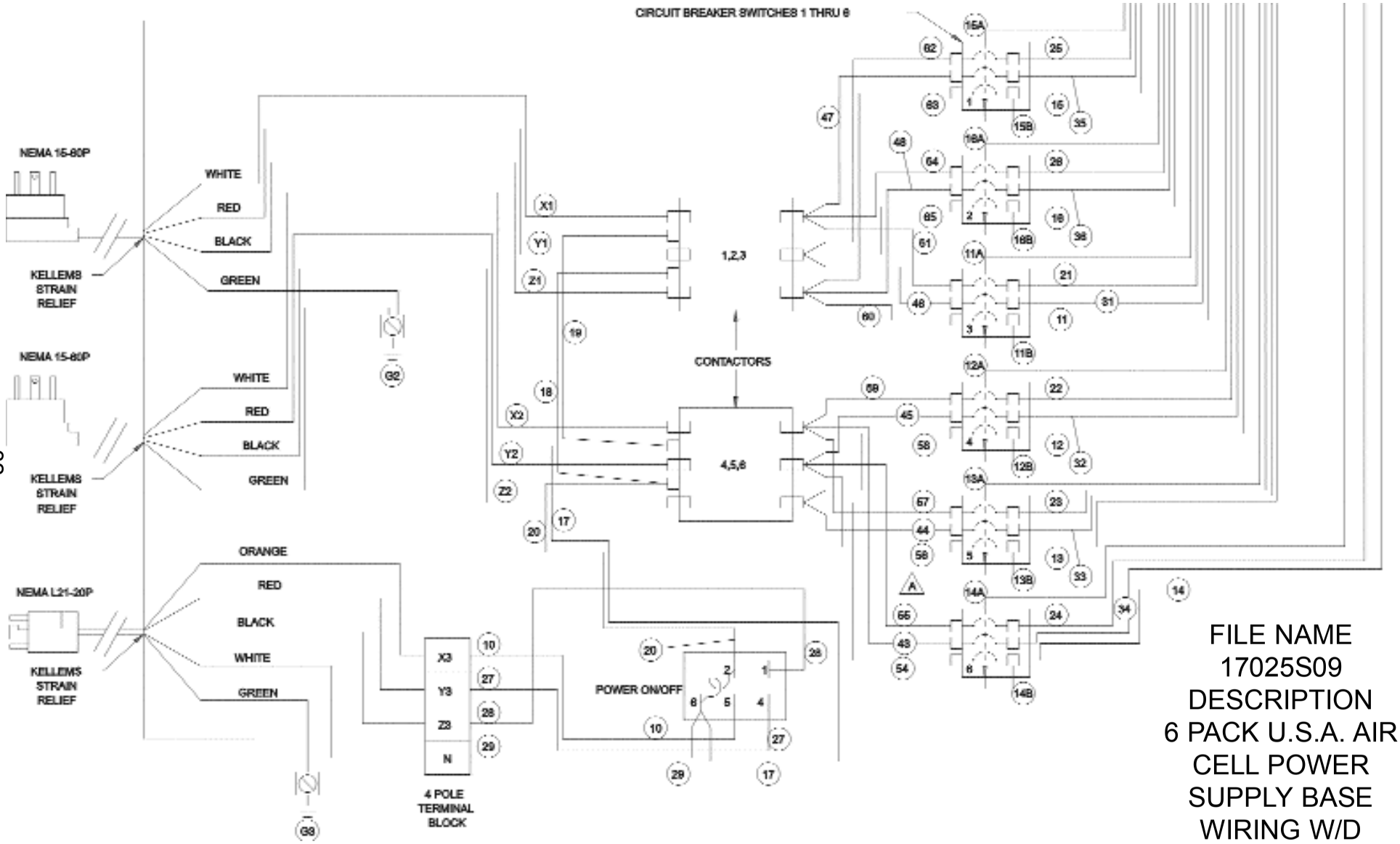
DESCRIPTION
POWER
SUPPLY
4 PACK US
FILENAME
17025S17



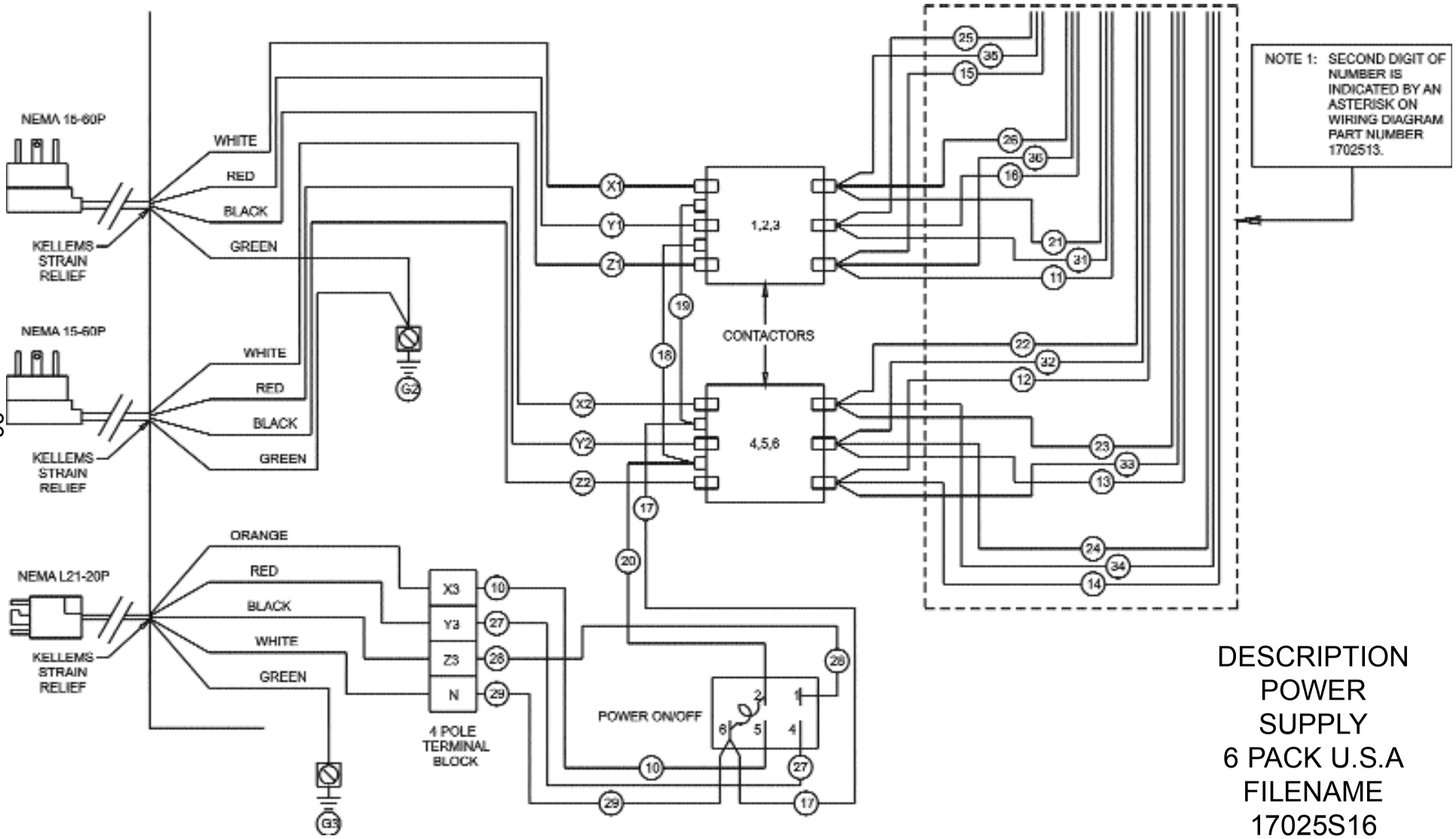
DESCRIPTION
AIR CELL
4 PACK
POWER SUPPLY
BASE SCHEMATIC
CANADA
PRIOR TO JULY
1993



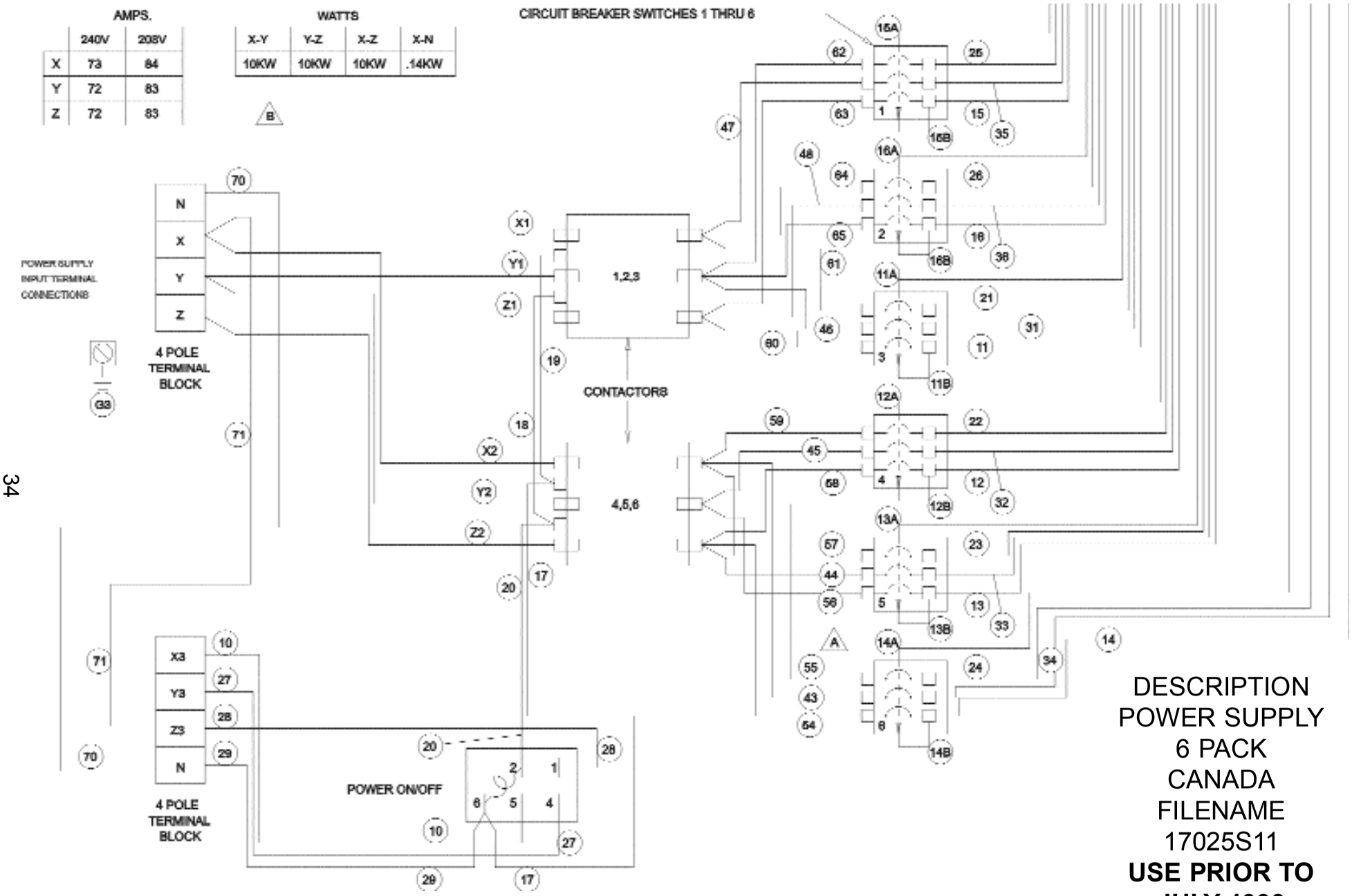
DESCRIPTION
POWER SUPPLY
4 PACK CANAADA
FILE NAME
17025S15
USE AFTER JULY 1993



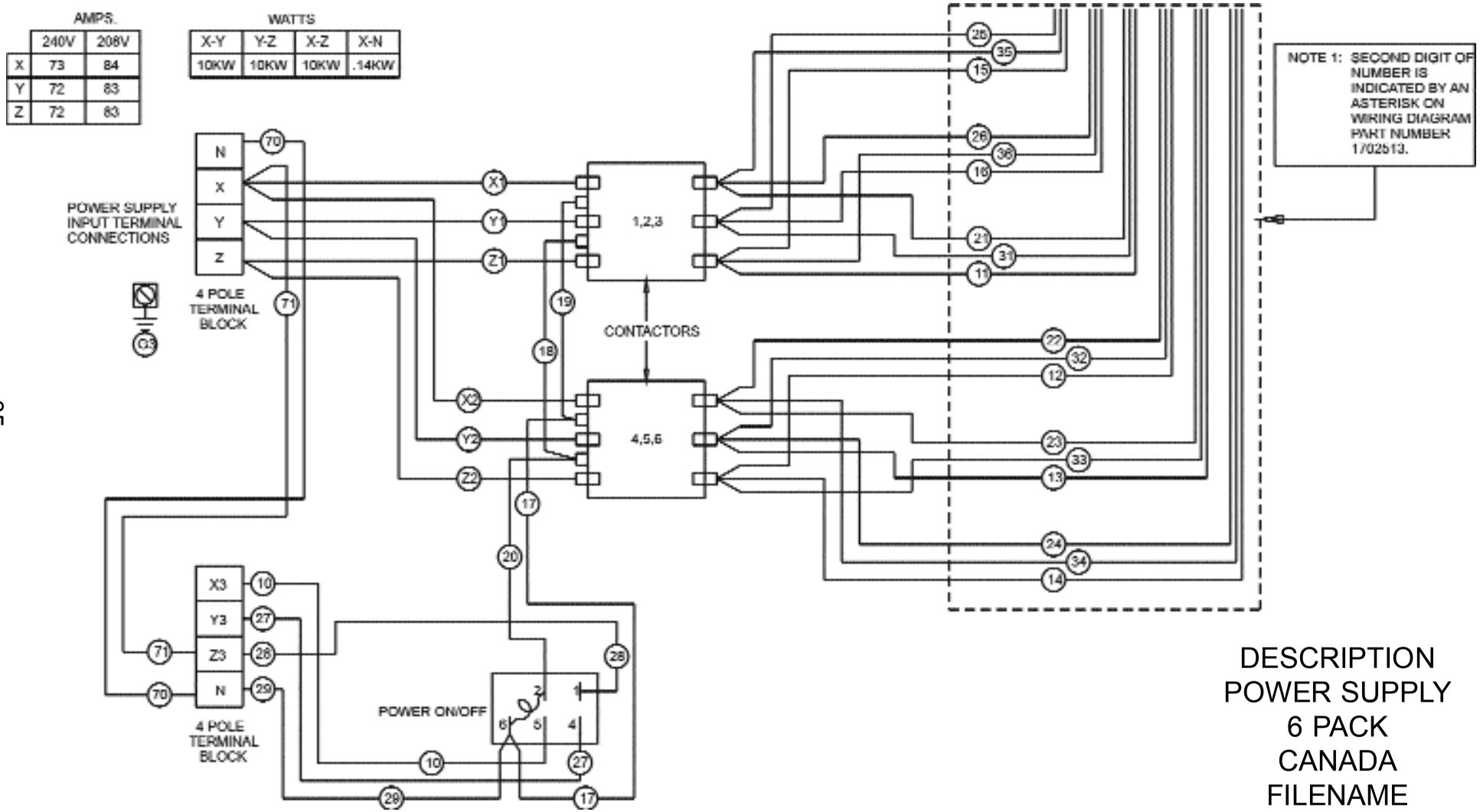
FILE NAME
17025S09
DESCRIPTION
6 PACK U.S.A. AIR
CELL POWER
SUPPLY BASE
WIRING W/D
USE PRIOR TO
JULY 1993



DESCRIPTION
POWER
SUPPLY
6 PACK U.S.A
FILENAME
17025S16
USE AFTER
JULY 1993



DESCRIPTION
POWER SUPPLY
6 PACK
CANADA
FILENAME
17025S11
USE PRIOR TO JULY 1993



DESCRIPTION
POWER SUPPLY
6 PACK
CANADA
FILENAME
17025S14
USE AFTER
JULY 1993

McDonald's